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Energy Administration and Regulation in California: An Analysis

Joint Committee on Energy Policy and Implementation

STAFF REPORT TO THE

JOINT COMMITTEE ON ENERGY POLICY

AND IMPLEMENTATION

ENERGY ADMINISTRATION AND REGULATION IN CALIFORNIA: AN ANALYSIS

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ABBREVIATIONS

AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACR	Assembly Concurrent Resolution
AFC	Application for Certification
APCD	Air Pollution Control District
ARB	Air Resources Board
BACT	Best Available Control Technology
BCDC	San Francisco Bay Conservation and Development Commission
CEQA	California Environmental Quality Act
Commission	California Energy Resources Conservation and Development Commission
CPCN	Certificate of Public Convenience and Necessity
DOE	U.S. Department of Energy
DOH	California Department of Health
DWR	California Department of Water Resources
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
EQL	California Institute of Technology Environmental Quality Laboratory
HCD	California Department of Housing and Community Development
MW	Megawatt
NOI	Notice of Intent
NSR	New Source Review Rules

ABBREVIATIONS - continued

OAT ..... California Office of Appropriate Technology

PUC ..... California Public Utilities Commission

R & D ..... Research and Development

RCRA ..... U.S. Resource Conservation and Recovery Act

SB ..... Senate Bill

SIP ..... State Implementation Plan

SRI ..... Stanford Research Institute

SWMB ..... California Solid Waste Management Board

SWRCB ..... California State Water Resources Control Board

EXECUTIVE SUMMARY

The Energy Resources, Conservation and Development Commission (Energy Commission) is one of the youngest of California's major state agencies. Created by the 1974 Warren-Alquist Act, it began operating in the early months of 1975. Significantly, the new Commission was not the result of an amalgamation or reorganization of existing state departments. Its responsibilities were truly new and its very existence was the result of a vigorously debated decision made jointly by a Republican governor and a Democratic legislature. Its basic charge was fourfold: to forecast electricity demand; to prescribe electricity conservation measures; to promote the development of new technologies for generating electricity; and to approve sites for new power plants.

To carry out its assigned tasks, the Commission was assigned some duties which can be described as "administrative" and others which can be described as "regulatory".

ADMINISTRATIVE DUTIES

-- Biennially, the Commission is required to prepare an initial or preliminary forecast which identifies electrical energy demands within each utility service area over 5-, 12- and 20-year periods.

-- The Commission is required to propose various electricity conservation measures, such as residential and non-residential building standards, efficiency standards for

heating, air conditioning and other appliances, insulation standards, load management programs, etc.

-- The Commission is required to promote the development of new technologies for electricity generation, such as solar, wind, biomass, and geothermal.

REGULATORY DUTIES

-- The Commission is required to adopt a final energy forecast after appropriate public debate and critique of the initial forecast.

-- The Commission is required to adopt conservation regulations after appropriate public debate and critique of its proposed regulations.

-- The Commission is to approve new power plant sites after appropriate public debate and critique of sites proposed by utilities.

The four fundamental responsibilities of the Commission are clearly synergistic. Conservation programs and new energy technologies are intended to reduce electricity demand and consequently reduce the number of conventional new power plants needed within California. When a utility does claim a need for a new facility, however, the Commission's forecast will validate that claim and the siting procedure will provide an orderly and expeditious decision on the most appropriate location for the facility.

It is axiomatic, however, that new institutions seldom perform exactly as their planners anticipated. Contingencies and

circumstances, unforeseen and unforeseeable at the inception of a new agency, inevitably affect its subsequent performance. In short, now that the Energy Commission has had four years of operating experience, prudent administration of the public's business requires an evaluation of its initial performance. The responsibility for that evaluation falls inescapably on the Legislature--because the Legislature was the principal architect of the Warren-Alquist Act and because only the Legislature can initiate change in the statute which regulates and directs the Commission's activities.

Assembly Concurrent Resolution 177 (Resolution Chapter 145, Statutes of 1978) established the Joint Legislative Committee on Energy Policy and Implementation for the express purpose of evaluating the Energy Commission's performance and reporting the results of that evaluation to the appropriate standing committee of each House of the Legislature. The staff of the Joint Committee hereby summarizes the major points of its evaluation and submits that evaluation to the Joint Committee for use in reaching its final decision. Accompanying this general summary is a complete staff report containing detailed findings, conclusions, data and examples which are not appropriately included in a summary document.

FINDINGS

I. THE COMMISSION'S PERFORMANCE

1. The basic insight of the architects of the Warren-Alquist

Act was, and remains, sound. The four major responsibilities identified in the Act--viz. forecasting, conservation, development of alternative energy sources and locating new energy facilities--are essential ingredients in any program that seeks to manage electricity growth in California.

2. The Energy Commission's conservation programs have been significant factors in reducing the historical rate of increase in demand for electrical energy. Its innovative forecasting methodology has substantially increased the accuracy of determining future demand for electricity.

3. The Energy Commission, with the cooperation and support of California's utilities, has taken the initiative in successfully proposing legislation to eliminate significant shortcomings in Commission procedures for locating power plant sites (SB 1859-Chapter 1013, Statutes of 1978). The intent of the new legislation is to limit the issues which can be raised and debated as part of individual power plant siting decisions. For example, when SB 1859 is fully implemented, the adequacy of the biennial energy demand forecast and the fuel types and technologies available for new power plants will be determined by special "generic" proceedings conducted prior to the siting proceedings.

4. Public participation in energy management decisions has

been facilitated by the Commission's unique office of Public Advisor--an office whose major task is to assist concerned members of the public in coping with formal Commission procedures.

II. DEFICIENCIES IN COMMISSION OPERATIONS

1. Although the architects of the Warren-Alquist Act were correct in identifying the four major responsibilities involved in managing electricity growth (viz. forecasting, conservation, development of alternative energy sources and site location), they overlooked the inherent conflict involved in assigning all four responsibilities to a single commission which would exercise both administrative and adjudicatory authority. This conflict is rooted in the fact that developing a proposed forecast, reviewing a proposed power plant site, proposing conservation requirements and energy sources--are all "line agency" responsibilities. There is, however, an adjudicatory role in making a final decision to <u>adopt</u> a forecast, to <u>approve</u> a power plant site or to <u>adopt</u> conservation regulations. This adjudicatory role is not compatible with the line agency role.

Adopting a final forecast of electricity demand, for example, is an adjudicatory responsibility which requires fair, dispassionate judgment among competing claims. At present, however, individual Commissioners participate

actively in the development of the proposed forecast. The same Commissioners are then required by statute to adjudicate criticisms of the proposed forecast--from whatever sources, conservation groups, utilities, environmental groups, etc.--before formally adopting the forecast. In short, existing law seems to assume that Commissioners can totally disengage themselves from their own work product to the extent that they can be dispassionate, uninvolved judges of that work product.

2. Annually, an increasing amount of the Commission's personnel and budgetary resources are being committed to its adjudicatory responsibilities. The Commission's own calendar, in fact, indicates significantly more time allocated to regulatory activities than to administrative ones. This trend is not unique to the Commission; in fact, it seems invariably to occur whenever adjudicatory and administrative responsibilities are assigned to a single agency. In the case of the Commission, however, if the trend is not reversed, conservation and alternate energy development programs are likely to be significantly blunted as Commission attention focuses increasingly on regulatory duties.

3. An additional shortcoming which emerges from assigning line agency responsibilities to a commission is that individual Commissioners tend to assume responsibility

for particular line agency programs (e.g., developing the proposed forecast, promoting alternative energy sources such as solar, etc.). Naturally enough under such circumstances, the Commissioner begins to direct the staff which is associated with "his" or "her" program. The result is uncertainty in the agency's chain of command and uncertainty in the executive director's statutory authority to direct and employ staff resources.

4. The assignment of line agency responsibilities to a commission also permits the Governor to avoid establishing any policy about electricity use in California and to avoid advocating any specific positions on important electricity management decisions. In the case of forecasting electricity demand, for example, the Governor does not have to identify the state policies and other assumptions which <u>he</u> believes are realistic bases for determining demand. Instead, the statute assigns this duty to five commissioners who, by virtue of their term appointments, are not directly accountable to the Governor. Current criticism may well be true that gubernatorial positions on electricity management issues are difficult to discern or discover. Existing law, however, does not require a Governor to take any such positions and, in fact, rather invites him not to do so.

5. In spite of the procedural improvements mandated by

SB 1895, there is no point in the electrical energy management process at which a utility's overall resource plan is reviewed. Such a review could be mutually beneficial to the state, to the utilities themselves, and to various groups who today find themselves in an adversary relationship to utilities on specific site location decisions. Such a review would provide all groups with an early forum in which to debate the reasonableness of the entirety of a utility's resource plan.

Most important, this debate would take place in advance of a utility's request to site a specific power plant. The unfortunate aspect of existing law is that debate on the reasonableness of a resource plan is forced to occur within the context of procedures to designate a site for a proposed power plant. By the time the site designation process occurs, a utility is sufficiently committed to a particular facility that, as a practical matter, a reasonable examination of alternatives is severely limited.

If utility resource plans are subjected to an initial, "preliminary" approval procedure, debate about alternatives would occur before a utility has made an irrevocable business commitment to a specific facility. Moreover, the specific power plants identified in an "approved" resource plan could be located expeditiously

when the time for their construction occurred by limiting the scope of the siting procedure.

RECOMMENDATIONS

1. Department of Energy The Warren-Alquist Act accurately identifies the critical line agency components of a state program to manage electricity growth. Responsibility for these line agency activities, however, should not be assigned to an adjudicatory commission, but rather to a true line agency--a Department of Energy.

   Such an institutional reorganization would ensure the development of responsible state positions on electricity growth policy and on individual power plant siting decisions. The Department Director, and ultimately the Governor, would be directly responsible for policy positions. Most important, the validity of Department positions would be tested in an adjudicatory proceeding conducted by a body which has not been directly involved with, or committed to, development of the positions themselves.

2. Energy Commission The Warren-Alquist Act has accurately identified the need for adjudication procedures in any state program to manage electricity growth. Specifically, the decision establishing a final, state-

approved electricity demand forecast, the decision identifying available fuel types, decisions adopting final conservation regulations, and decisions involving individual power plant locations--all require adjudication by as impartial a body as possible. The Energy Commission and its adjudicatory staff should be retained to perform this vital function. The Commission should no longer be responsible for any line agency functions which would cloud its adjudicatory impartiality. These functions, together with the current Commission's line agency staff positions would be transferred to a new Department of Energy.

3. Resource Plans In order to facilitate the siting of needed new electrical generating facilities, one new step should be required in the state's electricity growth management process. At present, that process involves three steps: (1) an official state forecast of electricity demand; (2) an official state determination of the fuel alternatives available for new power plants; and (3) individual power plant site designation. A large gap exists between the first two steps of the process and the final site designation. A utility, for example, may know that a new facility is justified by the electricity forecast. It also knows the fuel types it may choose to use for that facility. Currently, however,

it must wait until the siting phase of the process to receive any indication whether the general location, timing, specific fuel type, or capacity of a proposed new facility is reasonable.

A new procedural step is needed. Once the state has adopted an electricity demand forecast and has designated the fuel types generally available for new power plants, utilities should be required to submit their resource plans to the Energy Commission for review and approval. Such submission would trigger an adjudicatory process in which the utility, the Department of Energy, consumer groups, environmental groups, and others could review and debate the reasonableness of the entire resource plan. Once such a plan had been approved, a utility could, and should, receive an expedited decision on a siting proposal consistent with that plan.

This approach would focus debate on the truly pivotal point in an electricity supply management process--viz. a utility's resource plan. It would provide both the opportunity and the means to develop and validate contingency plans for a number of alternatives for meeting future electricity demand. Those facilities which time and circumstances proved most practicable could then be selected for construction as they were needed.

(Under this approach, a utility could still request approval of a facility not included in an "approved" resource plan. Expedited siting for such a facility, however, should not, and would not, be applicable.)

PROPOSED ENERGY AGENCY REORGANIZATION

EXISTING ENERGY COMMISSION FUNCTIONS	REVISED ENERGY COMMISSION FUNCTIONS	NEW DEPARTMENT OF ENERGY FUNCTIONS
Preparation/Adoption of Biennial Report	Adoption of Forecast and Supply Element	Prepartion of Biennial Report
Preparation/Adoption of Electrical Forecast	Adopt (Adjudicate) Electrical Forecast	Develop Electrical and Natural Gas* Forecast
Energy Trend/Impact Analysis		Energy Trend/Impact Analysis
Engineering Anaysis of Power Plant Proposals		Engineering Analysis of Power Plant Proposals
Site Screening/Reviews		Site Screening Reviews
Review/Certification of Power Plants	Decision on Certification of Power Plants	
Determination/Analysis of Available Technologies	Adjudicate Determination of Available Technologies	Analysis of Technologies: Costs, Environmental Impact, etc.
Examination of Utility Resources Plans	Adoption of Plans	Analysis and Alternatives to Plans
Development/Adoption of Conservation Regulations (building, appliance, load management)	Adoption of Conservation Regulations	Proposal and Formulation of Regulations
Promote/Operate Conservation Programs		Promote/Operate Conservation Programs
Enforcement of Conservation Standards		Enforcement of Conservation Standards
Development/Adoption of Solar Standards	Adoption of Solar Standards	Development/Enforcement of Solar Standards
Research and Development of Alternative Energy Sources		Research and Development of Alternative Energy Sources
Proposals for Alternatives to New Facilities		Proposals for Alternatives to New Facilities

* Long-range gas forecasting transferred from PUC.

INTRODUCTION

Assembly Concurrent Resolution (ACR) 177 (Resolution Chapter 145, Statutes of 1978) created the Joint Committee on Energy Policy and Implementation. ACR 177 requires the Joint Committee to submit to the Legislature its analysis of the "current effectiveness of the State Energy Resources Conservation and Development Commission" (Commission) and alternatives for reorganizing the Commission to provide for "increased clarity and cohesion in establishing state energy policy and implementing such policy". Among the alternatives which the Joint Committee must consider are: 1) reorganizing the Commission; 2) replacing the Commission with a new or alternate state agency; 3) reallocating the state's energy-related functions among the Commission, the Public Utilities Commission, the State Air Resources Board, the California Coastal Commission, and the State Water Resources Control Board. ACR 177 also created an Advisory Committee to make recommendations on these alternatives as well as other alternatives the Advisory Committee chose to consider.

This report sets forth the staff's analysis and recommendations concerning alternatives for reorganization and is intended to provide a basis for the Joint Committee's recommendations to the Legislature on the reorganization of the state's energy-related functions.

The report is divided into five parts:

1) Findings and recommendations.

2) A history of the Warren-Alquist Act.

3) A description of the Energy Commission's functions and its relations with other state agencies

4) A discussion of the Advisory Committee's activities.

5) The staff analysis of the Commission's effectiveness and of the alternatives for reorganization listed in ACR 177.

FINDINGS

Policy and Planning

- The basic insight of the architects of the Warren-Alquist Act was, and remains, sound. The four major responsibilities identified in the Act--viz. forecasting, conservation, development of alternative energy sources and locating new energy facilities--are essential ingredients in any program that seeks to manage electricity growth in California.
- However, despite the passage of the Warren-Alquist Act, California energy policy is not well articulated and it lacks clarity.
- State agencies with primary energy-related authority, the Commission, the Air Resources Board, and the Public Utilities Commission, frequently pursue policies that are not well coordinated and may often conflict with one another.
- California's energy planning activities have failed to provide the necessary guidance to the public and private energy producers and the people of California.
- Although substantial improvements have been made to "open" the energy planning process, there is no greater certainty and coordination in the energy planning process today than existed prior to the creation of the Commission.

- The Commission's practical ability to implement alternatives to a proposed plant is severely limited. This limited flexibility is exacerbated by the fact that in order for the Commission to meet its statutory obligation to provide adequate power as indicated by the adopted forecast, all of the plants proposed in recent utility resource plans must be approved.
- The Energy Commission, with the cooperation and support of California's utilities, has taken the initiative in successfully proposing legislation to eliminate several significant shortcomings in Commission procedures for locating power plant sites (SB 1859-Chapter 1013, Statutes of 1978). The recent agreement between the ARB and the Commission may provide added clarity in the siting process.
- Recent changes notwithstanding, with its current structure of energy responsibilities, California will be unable to provide a clear, coherent, and credible energy decision-making process.

Administration and Regulation

- Combining administrative and regulatory processes in one agency reduces the credibility of the regulatory process. It is difficult, if not impossible, for a member of the Commission to advocate the use of a particular fuel (i.e., coal, oil, or nuclear) and subsequently remain impartial and objective in a specific siting case.

- The combination of regulatory and administrative processes reduces the coherence of program administration and increases the difficulty of adequately deploying staff resources. The practical effect of combining these processes is that the regulatory activity becomes dominant at the expense of programs to develop future new energy sources.

Accountability

- The present state energy decision-making structure does not provide sufficient clarity in assigning responsibility for decisions.
- Several different state agencies are involved in solar energy and conservation programs making it difficult to place responsibility for those programs and making effective public participation nearly impossible.
- It is well established that plural bodies (Energy Commission and the Public Utilities Commission) generally cannot provide for the political accountability necessary to insure responsibility to the public.
- When the Governor has seen the need for new energy programs, he has used a line agency form of organization.

Organizational Issues

- Staff directions have come from the Chairman of the Commission as well as individual Commissioners with the result that staff efforts are not well managed.

- The lack of coordination between various agencies has resulted in a highly inefficient regulatory and planning process for meeting future energy needs.
- The present role of the Chairman as staff director has made unclear the role of the Executive Director.

Alternatives Development

- The Legislative Analyst and the Auditor General have noted serious deficiencies in the Energy Commission's Research and Alternatives Development Program.
- The result of an ill-defined alternatives development program may be the continued reliance on fossil fuels for power plants.
- The Energy Commission's conservation programs has been a significant factor in reducing the historical rate of increase in demand for electrical energy. There is, however, some concern over the open-ended nature of the Commission's conservation mandate.

Public Participation

- Public participation in energy management decisions has been facilitated by the Commission's unique office of Public Advisor--an office whose major task is to assist concerned members of the public in coping with formal Commission procedures.

RECOMMENDATIONS

- The present Commission structure should be substantially altered. The present regulatory and administrative processes should be divided between a Commission and a Department of Energy.
- The Commission's responsibilities should be limited to the regulatory process. Its primary functions should be adjudicating forecasts, resource plans, power plant siting proposals, and conservation regulations. It should have a limited staff to perform these functions.
- The authority of the Energy Commission to override standards set by state and local agencies should be reaffirmed by the Legislature.
- The new Department of Energy should be responsible for the preparation of the Biennial Report, the development of long-range electrical and gas forecasts, development and promotion of conservation and alternative resources, participating as an advocate in the proceedings of the Commission and Public Utilities Commission and providing technical and engineering analyses to the Commission and to all other relevant state agencies.
- The Commission should be required to approve utility developed resource plans indicating general location, timing, fuel type, and capacity of new generating facilities.

- o The Public Resources Code should be amended to require all relevant agencies (ARB, PUC, SWRCB, etc.) to provide initial determinations, within a specified time, of feasibility and policy consistency on proposals in the Biennial Report and the power plant siting cases. This would have the effect of placing existing agreements like that between the ARB and the Commission into law.
- o The existing electrical surcharge should be retained as a funding source for both the new department and the Commission.

Discussion

The purpose of this study is to set forth the most appropriate way of organizing the state's energy-related responsibilities. The first step is to examine the current organizational structure. This study will demonstrate that the current structure is deficient in several areas. It has not produced a clear and understandable energy policy; the planning process is confused, uncoordinated, and fractured; it is difficult to assign responsibility for energy decisions and planning duties. Internally, the Commission lacks clear staff direction and the roles of Commissioners and staff are confused. The Warren-Alquist Act has combined the regulatory and administrative responsibilities in one agency,

resulting in internal conflict and a loss of confidence in the regulatory process.

A review of these problems and the proposed solutions leads to four major questions: (1) Why retain the Commission at all? (2) Should the PUC assume the Commission's functions? (3) Why not simply make minor adjustments in the roles of the staff and Commissioners to correct the problems which this study points out? (4) Why create a Department of Energy?

Why Retain the Commission?

Eliminating the Commission would not eliminate the need for a plural body to make the case-by-case decisions on power plant siting, adoption of a forecast, or conservation regulations. These issues require an open forum for debate where parties of differing views can present their arguments before a body of dispassionate judges. A plural body allows for a broad representation of views and the interplay of various interests. Since these issues require final decisions on large societal investments, a plural body may provide for the necessary consensus to allow decisions to be made with some degree of public acceptance.

The Commission should be retained to perform the regulatory responsibilities for energy use and development. The Commission's responsibilities should be limited to the disposition of these issues; administrative responsibilities should be removed.

The Commission's duties would be the adjudication of power plant siting cases to determine questions of fact regarding need, environmental suitability, economic feasibility, and other

related issues. The Commission's duties would extend to the adoption of an electrical demand forecast to determine the level of future need. In adopting the forecast, the Commission would review the evidence and arguments of the utilities, the Department of Energy, and any other interested party. The Commission would also be responsible for the approval of an electrical resource plan. (This proposal will be discussed in more detail in this section of the report.) Resource planning would require the state's utilities to submit their proposed plans to the Commission and Department, subsequent to the adoption of the forecast. The plans would undergo review and would be challenged by other proposals or comments from the Department of Energy and others. The consideration of conservation standards and other regulations would also be the responsibility of the reorganized Commission.

In all these activities, the Commission is to act in a judicial manner, providing an open forum for debate and an atmosphere where evidence can be weighed and judgment applied to specific cases. Its primary function would be to make decisions on particular issues which require a wide range of views and where various interests are affected by proposed actions. Thus, the role of the Commission would be limited to quasi-judicial responsibilities needed to satisfy the regulatory process.

Should the PUC Assume the Commission's Functions?

It has been proposed that the PUC assume the responsibility for these regulatory activities. This would still enable decisions to be made by a plural body and would consolidate other

functions now performed by the PUC with those of power plant siting and forecasting.

There are, however, several reasons for not moving these responsibilities to the PUC. First, the PUC is not staffed to perform these functions and would be required to recruit or transfer from the Commission many individuals of varied disciplines. This would undoubtedly be accompanied with the usual "start-up problems". Second, there are several power plant proposals moving through the regulatory process at the present time. If the regulatory process is disrupted, decisions on these plants may be delayed or be inadequately reviewed and fail to meet possible subsequent legal challenges. Third, many of the present difficulties are the result of poor coordination in both planning activities and the regulatory processes. These may be exacerbated by having a regulatory process in San Francisco and an administrative process in Sacramento. (This assumes the creation of a department. If all present functions now held by the Commission are given to the PUC, many of the noted problems will continue.) Finally, the PUC's long tradition of rate regulation may dominate a process which must consider and balance environmental, economic, and social considerations.

Why not make minor adjustments to the present system?

It may also be argued that the present structure is sound--all it needs is some "fine tuning" to define more carefully staff's and Commissioners' roles and responsibilities. Unfortunately, such "fine tuning" will not solve the current deficiencies.

The principal flaw in the current institutional structure is that both regulatory and administrative processes are performed by one agency. This structure gives the same individual the roles of both judge and advocate; the program developer and advocate is also responsible for adjudication. This structure creates internal conflicts which cannot be resolved and reduces the integrity of the regulatory process. The Warren-Alquist Act has improperly placed these two processes together.

For example, the Chairman of the Commission appeared recently before the State Water Resources Control Board to recommend that the Department of Water Resources proceed with its coal-fired power plant proposal and stated that coal is an environmentally safe fuel. This action would be proper for a department director advocating a program or policy, but it is improper for a member of a quasi-judicial body to promote activity which will be before that body in a specific case. (The Department of Water Resources is expected to file an NOI for this plant.)

Furthermore, to declare, by statute or otherwise, that there is a distinction between the staff and Commissioners will not alter the conflicting combination of regulatory and administrative

processes. These processes must be placed in separate agencies. Each agency should have control over its own staff and budgetary decisions. To leave the Commissioners with the administrative controls over staff and budgetary resource allocation will not alter old patterns. The Governor has demonstrated that he requires a vehicle for energy program innovation to reflect his policies. This requirement can be fulfilled only by a department, which will provide accountability and hopefully, more efficient action. For example, the Governor relies on line agencies, such as SolarCal, to implement innovative energy policies. Moreover, the coordination of planning activities needs a central focus under the control of the Governor. Plural bodies cannot effectively coordinate activities with any degree of coherence.

Why a Department of Energy?

The line-oriented responsibilities currently performed by the Commission should be given department status and placed within the Resources Agency. The Department would assume the administrative responsibilities of program development and operation, policy development, analysis, and advocacy. It would be led by an appointee of the Governor, serving at the Governor's pleasure.

The duties of the Department would be to develop the analyses necessary for the Biennial Report. This would require the Department to analyze energy trends, develop electrical and

natural gas forecasts and examine the environmental and economic impacts of various energy development trends and alternatives. The Department would present this information, along with the adopted forecast and the approved resources plans in the form of the Biennial Report. It would constitute the Governor's statement of energy policy. The Department would be responsible for most of the state's analytic activities devoted to energy and would perform the engineering analysis for power plant proposals. The Department would analyze and comment on the utilities' applications for new facilities before the Commission.

In addition, the Department would be responsible for the energy-related developmental and promotional activities in state government. Proposing conservation regulations to the Commission and operating promotional programs, such as education and outreach activities, would be the responsibility of the Department. The research and promotion of alternative energy sources is another duty the Department would assume. The Department should assume the responsibilities now performed by the SolarCal Office and the Office of Appropriate Technology (OAT).[1]

This study will show that the combination of regulatory and administrative processes in one agency is an ineffective institutional structure. Program operation and development require a more traditional line agency structure. Plural bodies generally are not used for these purposes. A 1965 study by the Little Hoover Commission on the use of boards and commissions in the

Resources Agency stated, "A general observation and recommendation (is), that plural bodies normally not be used to administer, manage, direct, or operate a program. The case for a single, responsible executive in this capacity is well documented."[2] The Legislative Analyst and the Auditor General have noted the difficulties experienced by the Energy Commission in providing clear priorities and effective management in the alternative research and development program.[3] Program development and operation need direct, accountable action. Responsibility for their management should not be divided among several co-equal commission members.

The Governor should have the responsibility, and the administrative machinery, for executing policy, coordinating energy activity, and implementing new programs. When the Governor initiates a new program he does not turn to the Commission. He has created both the SolarCal Council and the SolarCal Office to encourage and promote solar energy. The Office of Appropriate Technology was created to promote the design of structures and processes which utilize renewable resources. In 1977, the federal government requested proposals for an Energy Extension Service, a large energy conservation effort. The Governor named the State Architect as the lead responsible agency. (For the state's most recent effort in this area, OAT is the lead agency.)

A department structure can increase efficiency and coordination. Budgets can receive more expeditious approval, contracts can be

executed more quickly, and staff receive clear direction in a line agency. Business can be conducted in an administrative fashion rather than in a courtroom setting which can be costly and time consuming. Since a department is led by one person, it can formulate policy and interagency agreements without the necessary delay and debate encountered in a plural body. Clear leadership and the absence of the need to develop a consensus means that staff resources can be more appropriately used and priorities clearly established along programmatic lines. The department director can be directly accountable to the Governor and can draw on executive authority to provide coordination with other energy agencies.

Adjudicatory bodies place primary emphasis upon regulatory activity. If one agency is given both regulatory and administrative roles, there is a shift of resources toward the regulatory activities. An examination of the Energy Commission's calendar during any month will illustrate the amount of time spent on regulatory activities. For example, the Commission's calendar indicates that from January 29 to March 28, 1979, the Commission will devote 75 percent of its activity to siting and regulatory cases. The Commission's budget proposals in the past two years have reduced the promotional activities substantially more than the regulatory activities. Even within programs, budget cuts were felt more in promotional activity. The conservation program's budget proposals have been reduced 50 percent in the past two years. Most of these

cuts were made in education and outreach programs while the standards review and enforcement was reduced markedly less. A department structure can at least provide more attention and preserve more resources in these areas than a plural body. The immediate and controversial demands of a regulatory body will dominate the concern and attention of a plural body executing both regulatory and promotional functions.

When the regulatory and administrative responsibilities are separated, the need for debate and an open forum is still provided for those issues which require such activity. Under these recommendations, the Commission would provide the forum for the debate and weighing of issues and the Department would provide the speed of action, coordination, and promotion necessary for energy policy to be developed, defined, and implemented. The separation of these processes still provide for the four major energy functions to be located in one agency, but it aligns the regulatory and administrative responsibility in a more workable structure.

A major question posed by the separation of these processes is the ability of the policy developing agency to have any real impact if the decision on policy in a specific case is made by another body. Can policy have any real impact when there is no regulatory process coupled with it to assure implementation?

The recommendations made here can provide for policy to have an impact. There are two policy-sensitive instruments which the

Department will have a substantial role in developing and promoting before the Commission: the electrical forecast and the resource plan. The electrical forecast is sensitive to a number of policy considerations, such as future growth trends, conservation activities, and energy prices. The resource plan is based on the availability of alternative energy resources, costs, and environmental impacts. The Department exerts influence over both these instruments through the development of forecasts and resource plans. In addition, the Department will operate many programs which influence both the adopted forecast and the resource plans. The Department's activities in conservation, for example, would be registered in the forecast and its success in alternative energy development will affect the adopted resource plans.

There are also a number of policy and program initiatives that can be taken by the Department which do not require regulatory approval. The Governor established the SolarCal Council and Office to pursue his solar energy policy and to establish a program with home builders. This did not require any regulatory approval. Many programs in the conservation, alternatives development, and energy analyses fields can be undertaken without the need for regulatory activity. The policy impact in these areas can be facilitated by a department structure. Programs can be initiated and implemented with more speed and political backing.

There are also areas in which a check upon the policy and program initiatives is needed. It is desirable for policy to have an impact and to direct the state's resources, but issues such as environmental quality and rate structure need protection from ill-conceived or incomplete policies. Policy must not only be implemented but it must also be sensitive to established policies in other areas. The use of coal for power plants, for example, should be examined for its effect on air quality, costs, and human health. There are questions which require the dispassionate and objective review of individuals whose task it is to weigh facts and to hear all interested parties. These decisions need to be insulated from day-to-day political forces.

Resource Planning

Resource planning refers to the process of preparing to meet future electrical needs with appropriate resources. This requires that fuel type, capacity, plant type, and perhaps general location of new facilities be defined early enough to plan, obtain permits, purchase materials, and construct new facilities. The state's role in this area is now limited to determining available technologies, testing alternatives in the NOI, and reviewing alternative supply proposals as part of rate applications.

The state's role should be modified to require the Commission to approve resource plans. These approved plans would become part of the Biennial Report and provide the policy and planning guidance necessary to assist planning in the private sector. Agencies which

exercise authority influencing energy development (ARB, PUC, SWRCB, Coastal Commission) would be statutorily required to coordinate their planning and permit activities with the resource plan. This coordination allows agencies to focus on a specific product and should provide the early indication of feasibility needed to plan effectively. A utility would know, for example, if a particular proposal was impossible because of limited air quality or water availability before an application was ever filed.

Utilities would be required to submit resource plans every year. These plans would be made to correspond to the previously adopted forecast and would be presented to the Commission for approval. The plans could also contain a number of reserve facilities to meet contingencies, which may occur in the siting process. The Commission would provide the open forum for debate and review at the public hearings. Utilities, the Department of Energy, interested groups and the public could present alternative proposals to the Commission to be included in the resource plans. The Department would also be responsible for analyzing these plans. The Commission would weigh proposals, against the criteria of cost, feasibility, environmental impact, and other factors specified in statute. There would be a specified time for adoption of the plans.

Once adopted, these resource plans would serve as the guidelines for the submission of applications for siting approval. A utility which submits an application for a facility contained

in the plans would move through a more expeditious siting process. Many of the generic issues involved in siting such facilities could be completed in the Department of Energy's analyses making an expeditious siting process feasible. A utility, however, would be free to pursue a proposal not contained in the plan, but an increased burden of proof would be placed upon the applicant and a more lengthy siting process would be required.

The Department of Energy's role in this process is to review and critique the resource plans and provide its analysis to the Commission. The Department would be required to conduct generic studies on various fuels and plant types to provide the state's early planning in this area. The Department could also propose its own resource plan to the Commission.

Resource planning, much like demand forecasting, is an interactive process requiring substantial information from state agencies and the utilities. It has taken time to produce a sound electrical demand forecast which covers all sectors and more work still needs to be done. It should not be expected that the state will be capable of performing immediately all the tasks necessary for developing a workable resource plan. If the state assumes increased responsibility in this area, it would be understood that it will take time and some additional resources to perform this function well.

The state is presently exercising some of the responsibilities required for resource planning. The various costs, environmental impacts, technical feasibility, and general location for electrical

facilities are currently reviewed and analyzed by the Commission. Some of these reviews occur in the determination of available technologies included in the Biennial Report. Other reviews occur during the NOI where alternative proposals are tested against utility applications. The difficulty with the present structure is its propensity to analyze these issues in the latter part of the regulatory process. The NOI is not the appropriate stage of the siting process to consider alternatives. Given the time and money expended by utilities and others on the proposal, and the lead time necessary for many facilities, alternatives would be difficult to implement at this stage. An earlier analysis of alternatives is necessary.

Resource planning is one of the few ways to provide any real degree of certainty and coordination of state energy activities. Resource planning focuses the efforts of state agencies and compels them to provide an early indication of feasibility, cost, and environmental impact. This will not provide a guarantee, but it will give early warning and indication of the likelihood that a proposed facility can be constructed.

Resource planning is also a more certain way for the state to influence utility activity in the area of alternatives development. Presently, the tools available for the state to encourage and develop alternative resources are research, regulation, and financial incentives through the tax system.

Utilities spend far more money on research than the state. The state has provided financial incentives for some alternative sources and has used regulation through the siting process to encourage the use of certain fuels and plant types. The state has not used the planning process to influence alternative resources. Resource planning would allow the state to have an influence over utility planning and expenditures of funds for alternatives. It can give the state an increased ability to encourage alternative resources by offering a positive incentive for alternatives development.

This resource planning activity will not replicate the work of utilities nor is it a state-imposed plan developed by an unresponsive bureaucracy. This recommendation would require an interactive process between utilities, the state, and the public. Planning activities would be known early with time to consider alternative proposals. A true dialogue could be opened between the three groups, which would still allow for utilities to exercise their own discretion and provide for state policy influence over the use of public resources.

Common Timetable

One of the essential findings of this report is that the planning and regulatory process is confused, uncoordinated, and fragmented. Creating a department structure and providing for a resource plan will assist in reducing the confusion and provide for increased coordination. More is needed, however, to assure

that the various energy-related agencies coordinate both their regulatory and planning activities. To provide this assurance, a common timetable should be placed into statute which requires these planning activities to be coordinated according to specific deadlines. The Commission's authority to override the energy decisions of other state and local agencies in siting cases should be affirmed by statute.

Each of the major energy agencies (the ARB, the PUC, the SWRCB, and the Coastal Commission) should be required by statute to comment and make findings of initial feasibility of the resource plans and any power plant siting cases. These agencies should be required to provide this analysis in the Biennial Report and the NOI on a time certain basis. Each agency will be required to provide, where appropriate, estimates of environmental impact and potential mitigation, likelihood of meeting any applicable federal and state standards, costs of control measures, and the financial requirements needed for the proposed projects.

The recent ARB-Energy Commission agreement is a good illustration of the manner in which the regulatory process should be coordinated. This agreement specifies the time at which the ARB will make initial determinations in the Energy Commission's regulatory process. The agreement also indicates the authority of each of the agencies (ARB, Commission, and local districts) and makes clear the extent to which local districts can go in enforcing state standards. The agreement, however, is only enforceable as long as the two agencies agree on its elements. To clarify its enforceability and ensure its legal standing,

this type of agreement should be placed in the law. In addition, the agreement only involves the ARB and Commission relationship in the regulatory process and does not address planning activities where the need for an early indication of feasibility is needed.

The other major agencies, such as the PUC, SWQCB, and Coastal Commission, should be included in similar arrangements. The PUC, for example, should provide a preliminary indication of the financial feasibility of the projects contained in the resource plan and the impact on the rate base of the various alternatives. This can provide the department and Commission with early indication of the feasibility of various proposals and will enable the resource plan to be adopted with some reasonable level of certainty that the project can be financed. An increased level of analysis should be provided at the NOI stage, where the specific proposal in the resource plan takes on a site-specific nature. Thus, the level of comment from other agencies should be increased so that barring substantial errors or changes in federal or state requirements by law, the project should receive a preliminary "go" or "no go" determination.

By focusing the attention of the various state agencies on a central document, requiring their participation by statute, making a line agency the coordinating vehicle with responsibility to the Governor, and initiating the process early, the state can provide for the coordination and certainty necessary for sound planning of future energy needs. The requirement makes binding what now rests on agency discretion.

Surcharge

The Commission is presently funded by a surcharge of up to 0.2 mills per kilowatt hour of electricity sold in the state. The surcharge was intended to have the users of electrical energy pay the cost of planning, regulation, and alternative activities. As an individual's electrical use increases, his or her support for the state's electrical energy activities increases.

The surcharge has proved to be an excellent revenue source directly related to the state's energy responsibilities and should be retained to fund both the Commission and the Department of Energy. The budgets of both agencies should be presented to the legislature. Any disputes or conflicts should be resolved by the Department of Finance or the Secretary of Resources.

FOOTNOTES

[1]It should be noted, however, that neither of these offices was examined in detail during the course of this study.

[2]Commission on California State Government Organization and Economy, The Use of Boards and Commissions in the Resources Agency, April 1965, p. 8.

[3]California, Joint Legislative Audit Committee, Improvements Needed in Planning and Monitoring Research and Development of Alternative Energy Resources, November 28, 1978, and California, Legislative Analyst, Supplemental Analysis, Item 173, Energy Resources Conservation and Development Commission, Research and Development Contracts, p. 1.

HISTORY OF THE WARREN-ALQUIST ACT

In the early 1960's, the state's utility companies took the lead role in planning for new supplies of electricity. Although the California Public Utilities Commission (PUC) had legal authority to certify new power facilities, the PUC's decision process did not seriously challenge the utilities' choice of power plant designs or sites. Oil and natural gas, which were then the primary boiler fuels, were inexpensive and in plentiful supply. Nuclear power was in the early stages of commercialization, but it looked promising. In general, the early 1960's was an era of optimism concerning the state's energy future.

During the late 1960's, growing public awareness of the diminishing quality and quantity of natural resources led federal, state and local governments to play a larger role in reviewing any project which was likely to have adverse environmental effects. Not suprisingly, the process of gaining approval for power plants became more difficult. By 1970, nearly 30 federal, state and local permits were necessary before a utility could construct a power plant.[1] Utilities began to express concern about delays in the power plant siting process and possible power shortages.

In the early 1970's, the Legislature made several attempts to bring order into the power plant siting process; most of the energy-related legislation introduced between 1972 and 1974 dealt with power plant siting.[2] In general, this legislation sought to create boards or commissions with exclusive authority to site new electrical facilities.

Three reports were published during this period which influenced the Legislature's approach to energy planning:

1) California's Electricity Quandary, which the Assembly commissioned from the Rand Corporation in 1972.[3]

2) Meeting California's Energy Requirements, 1975-2000, which the state's five largest utilities commissioned from the Stanford Research Institute in 1973.[4]

3) State Power Plant Siting: A Sketch of the Main Features of a Possible Approach, by California Institute of Technology's Environmental Quality Laboratory, which was also published in 1973.[5] This report was transmitted to the Assembly as Memorandum No. 4. These reports are summarized below.

The Rand Report

The Rand report consists of three volumes. Volume One deals with forecasting future demand for electricity; it suggests a methodology for developing such forecasts. Volume Two discusses power plant siting. Volume Three deals with slowing the growth rate in demand for electricity.

The Rand report states that fragmented authority in what was then the state's regulatory framework for electrical facilities hindered the state's ability to deal with delays in the siting process. According to the Rand report, many issues were "fall[ing] between the cracks".[6] The report states that "no one has adequate responsibility for:

> Comprehensive statewide land use planning and standards to ensure that a proposed power plant would be compatible with its surroundings.
>
> Clear and consistent guidelines for utilities to follow in long-range planning.

Identification of, and planning for, power systems and sites alternative to those proposed by utilities.

Overall allocation and conservation of natural resources, such as fuel and water.

Means for conserving, and reducing demand for, electricity and other energy resources.

Priorities to use in resolving conflicting needs and values.

Research and development of new technologies and better methods of selecting sites for power plants.

An organized method of presenting California's needs and priorities to federal agencies and of attempting to influence federal research and development policies and actions to meet California's needs."[7]

The report suggests that the state should establish an institutional framework for planning future energy facilities and assuring that needed facilities are constructed in time to meet increasing demand. The main elements of this framework are:

1) An "open planning" process involving the public and the state early in utilities' plans to construct new facilities.

2) A power plant siting agency which consolidates previously fragmented authority over land use, environmental quality, and energy policy.

3) An independent forecasting capability in either the siting agency or a line agency.

4) Policies for reducing energy demand.[8]

Within this framework, a utility would inform state authorities early its planning process of the kinds of facilities (i.e., fuel type, size) it intended to build and the general location of the facilities. The public would have access to this information and would have an opportunity to participate in the planning

process. The siting agency would develop a forecast of future demand for electricity and would determine the legitimate need for new facilities according to the forecast. The siting authority would then review sites where the utility could construct needed facilities. The state's role in reducing energy demand would be to promote conservation measures, such as home insulation, more efficient home appliances, and educational programs. The report argues that such conservation measures would reduce the need for additional electrical facilities and, consequently, would reduce the adverse environmental effects associated with energy facilities. The Rand report states, however, that "even if such [conservation] policies [are] successful...it is estimated that the growth in demand for electricity [even at a growth rate of 3% per year] will still be significant and many new power facilities will be required in the next 30 years."[9]

The Rand report is significant not only because it influenced the Legislature's actions, but also because it recommended that the state become involved in areas where state government previously maintained no authority. For example, the state had no role in conserving energy, in planning for future energy facilities, and in providing public access to utilities' plans early in the planning process. The state's regulatory authority over energy matters was confined at that time primarily to health and safety issues.

The Stanford Research Institute Report

After the Rand report was published, the state's five largest utilities[10] contracted with Stanford Research Institute (SRI) to study California's future energy needs and the problems which the state faced until the year 2000. The SRI report, issued in May 1973, differs from the Rand report. SRI concludes that a nationwide energy shortage will occur in the future, but the shortage will be less severe in California. The report argues that energy prices will continue to rise, but that electricity prices are non-elastic; that is, demand for electricity will not decline substantially as prices rise. The report discounts the contribution that alternative energy resources, such as solar and geothermal energy, can make to the state's energy supply in this century, and states that the state will continue to rely on oil, gas, hydro-electricity, and nuclear power for its future electric production. Finally, the report argues against the state's requiring energy conservation because it would have a negative effect on the state's economy.

It is obvious that the two reports, Rand and SRI, differ in their approach to solving California energy problems. Basically, Rand argues for a systematic state involvement in energy planning and regulation, while SRI argues for state involvement to extend only in the power plant licensing process and in simplifying the regulatory maze that federal, state, and local government regulations created. Both reports indicate that division of state

authority and requirements for numerous permits before new power facilities can be constructed cause delay and indecision in the regulatory process.

Environmental Quality Lab

Early in 1973, the Assembly Subcommittee on Electrical Energy Policy held several days of hearings on electrical power and how it should be planned and regulated. The Environmental Quality Laboratory (EQL) Memorandum No. 4 was presented at these hearings. This document outlines the features of a siting process; it substantially influenced the drafting of the Warren-Alquist Act. The major features of this memorandum are summarized below.

Siting Council - The memorandum calls for a siting council, composed exclusively of public members, "which should have the sole authority and responsibility to select and certify, from among alternatives, the sites and conditions for nuclear and fossil-fueled power plants". The council is to be the "one-stop" siting agency for the state.[11]

Alternative Sites - EQL argues for a planning process that gives early attention to "alternative sites, designs, fuels, transmission corridors, etc."[12] The recommendation is for the siting process to provide five alternative sites, which would later be narrowed to three. This procedure would create an inventory of acceptable sites for later use.

One-Stop Authority and Preemption - "A rational siting program must, we believe, abandon the pattern of fragmented authority that characterizes the present siting process. Fragmented authority has produced unnecessary delay, confusion, parochialism, inconsistency, and buck-passing. We believe that in the interest of efficient and thorough planning, the siting council should (a) operate on a one-stop basis and (b) should preempt local jurisdiction over the environmental issues related to siting."[13]

Open Planning - EQL called on utilities to identify their supply proposals early in the planning stages, and urged early public access and full participation in the decision-making process. This process was seen as a "cooperative venture rather than an adversary contest in which each side tries in a public hearing to convince a third party of the correctness of its views".[14] The open planning concept has received considerable attention since the EQL memorandum; the Energy Commission's Notice of Intention (NOI) procedures is an attempt to initiate open planning. EQL defined open planning in the following manner:

> Open planning would begin at the outset of the decision process--at the time, that is, when a utility initiates its own inquiries about the need for new capacity, its location, design, and operation. Utilities would be required to announce the beginning of their inquiries and to invite meetings with any concerned groups and individuals, both public and private. They would also be required to actively seek out such groups and individuals and to solicit their views.[15]

EQL's memorandum sets the stage for both the informal NOI process and the concept of a Public Advisor, whose duty it is to seek out and to assist the public before the Commission. The Commission's current siting process differs, however, from the process EQL describes. The most critical difference concerns the question: When does the open planning process start?

Following the publication of the Rand report and additional hearings in the Assembly, most energy legislation sought to increase the state's role in energy planning by placing in one state institution the authority for forecasting, conservation, and research, as well as siting. This combination of regulatory and promotional functions was contained in SB 283 (Alquist), introduced in the 1973 Session. The bill was passed by both Houses but was vetoed by Governor Reagan. In May 1974, following the Arab oil embargo, an almost identical bill, the Warren-Alquist Act (AB 1575 - Warren), was passed by the Legislature and was signed into law by Governor Reagan.

FOOTNOTES

[1]Maureen Fitzgerald, "Has State Government Done Its Part", California Journal, 4(June 1973):p. 191.

[2]e.g., SB 1310 (Alquist), 1972; SB 283 (Alquist), 1973.

[3]W. E. Mooz; C. C. Mow; R. H. Ball; R. G. Slater; R. D. Doctor; K. P. Anderson; California's Electricity Quandry, 3 vols., Santa Monica: The Rand Corporation, September 1972.

[4]Meeting California's Energy Requirements, 1975-2000; Menlo Park: Stanford Research Institute, May 1973.

[5]James E. Krier, Lester Lees, Daniel Dawes, State Power Siting: A Sketch of the Main Features of a Possible Approach, California Institute of Technology, Environmental Quality Laboratory, Memorandum No. 4, February 1973.

[6]Mooz, California's Electricity Quandry, 2:vi.

[7]Ibid., pp. vi-vii.

[8]Ibid., pp. 34-58.

[9]Ibid, pp. vii.

[10]Los Angeles Department of Water and Power, Pacific Gas and Electric Company, Sacramento Municipal Utility District, San Diego Gas and Electric Company, and Southern California Cas Co.

[11]Krier, State Power Plant Siting, p 2.

[12]Ibid., p 4.

[13]Ibid., p 5.

[14]Ibid., p 7.

[15]Ibid., p 8.

STATE ENERGY FUNCTIONS

THE ENERGY COMMISSION

The Warren-Alquist Act gave the Commission responsibility for four energy functions: forecasting and planning for future energy demand; energy conservation; power plant siting; and research and development of energy sources of unique benefit to the state. Each of these functions is examined below.

Planning and Forecasting

The Commission carried out its planning function by preparing every two years a report to the Governor and the Legislature which expresses the state's energy policy. Public Resources Code Section 25309 states the general nature of the Biennial Report:

> "...a comprehensive report designed to identify emerging trends related to energy supply, demand, and conservation and public health and safety factors, to specify the level of statewide and service area electrical energy demand for each year in the coming 5-, 12-, and 20-year periods, and to provide the basis for state policy and actions in relations, thereto, including, but not limited to, approval of new sites for additional facilities."

The purposes which the Biennial Report serves are:

> To determine and establish the goals that must be met in order to satisfy the electrical energy needs of the state.

> To identify and evaluate the variety of opportunities available in the state for satisfying its electrical energy needs.
>
> To identify and evaluate the relative costs and benefits, impacts, and risks of alternative ways of meeting the state's electrical energy needs.
>
> To set forth the policies which will guide the Commission in accomplishing the goals that are established.
>
> To set forth the knowledge findings, criteria and tests which will be used by the Commission in making decisions on specific electrical energy proposals.[1]

Thus, the Biennial Report is the state's central planning document for energy demand and supply.

One of the main features of the Biennial Report is the forecast of demand for electricity. The Warren-Alquist Act requires the state's electrical utilities to submit to the Commission every two years reports specifying 5-, 12-, and 20-year forecasts of demands and resources in their respective service areas. The Commission must establish a common forecasting methodology for utilities to use in preparing these reports. Utilities are allowed, however, to include in the reports additional forecasts based on their own methodologies. The Commission must evaluate the

utilities' forecasts, taking into consideration the Public Utilities Commission's comments; the Department of Finance's population growth estimates; statewide and regional land use, transportation, and economic development programs; critical environmental issues; public health and safety; and the effect on electricity rates of new facilities.[2] The Commission also must identify reasonable alternatives to the electricity-generating technologies which utilities propose.

The Commission must publish preliminary and final reports containing its findings and conclusions on the utilities' forecasts. These reports precede the Biennial Report. The Commission must hold hearings prior to issuing the final report. The reports are based on the Commission's independent analysis and public comments on the utilities' forecasts. The contents of the reports, which are generally reiterated in the Biennial Report, include:

1) The Commission's evaluation of the environmental, economic, health, and safety issues associated with constructing and operating the facilities which the utilities propose.

2) Alternative technologies which the Commission identifies as reasonable.

3) The Commission's determination of anticipated demand for energy on a 5-, and 12-year basis. This determination of demand, which includes all reasonable conservation efforts, is used as a basis for certifying new facilities. The Commission's determination of 20-year demand is used as a basis for recommending energy conservation activities.

4) A statement of what new facilities are needed statewide and in each service area.

5) An analysis of methods to reduce the growth in demand for electricity.[3]

When the Commission began its operation in 1975, it did not have sufficient staff or data to generate an independent forecast. The Commission adopted as its first forecast the same forecast which the Public Utilities Commission (PUC) developed pursuant to its General Order 131. The current forecast, which the Commission adopted in 1977, anticipates a growth rate of 3.8% per year over the next 10 years. This growth rate calls for an additional 23,700 MW of electrical capacity by 1990. The Commission's next forecast, which is due in the spring of 1979, is expected to show a lower growth rate for the next 12 years.

Chapter 1013, Statutes of 1978 (SB 1859, Alquist), made two important changes in the Commission's planning and forecasting mandates. First, the Commission's demand forecast is now the primary forum for determining all conservation, load management, and other demand-reducing measures which can reasonably be expected to occur. Second, the Commission must hold "generic" proceedings (Section 25309) to determine the commercial availability of alternative generating and nongenerating technologies (e.g., load management, fuel cells). The first change specifies, in effect, that conservation issues are to be considered only in the Commission's forecast and not in individual siting cases. The second change allows the Commission, with respect to generating technologies, to "define the threshold evidentiary burden for any person proposing a technology in a siting case".[4] That is, the generic proceedings allow the Commission to determine how much

and what kinds of information are necessary in order to offer a particular alternative as a challenge to whatever technology a utility proposes in a siting case. For example, if the generic proceedings were to indicate that fuel cells are commercially available, it would then be possible to perform a comparative environmental, financial, and technical analysis of fuel cells versus the utility's proposal in a siting case. Both of these changes are intended to expedite the siting process.

One issue which the Commission's planning mandates leave unresolved is the extent to which the Commission should be involved in resource planning. Resource planning can be defined as determining the location, fuel type, capacity, and chronology of new generating facilities. Although Chapter 1013, Statutes of 1978, prohibits the Commission from mandating a specific supply plan for any utility, the same legislation requires the Commission to include in the Biennial Report some elements of a supply plan: a statement of probable capacity additions on a service area basis; the availability of power from cogeneration and purchased power; a determination of the commercial availability of generating technologies; and an indication of those technologies which merit additional research and development.

Conservation

The Warren-Alquist Act requires the Commission to conduct a general assessment of energy conservation opportunities in the state. The general assessment includes continuous studies on:

1) Pricing of energy.

2) Improving building design and insulation.

3) Restricting promotional activities to increase electricity use.

4) Improving the efficiency of home appliances.

5) Improving power generating and transmitting facilities.

6) Comparing efficiencies in alternative methods of energy use.[5]

The Commission is required to include its recommendations on conservation in the Biennial Report.

The Commission is also required to implement conservation measures through regulations. Specifically, the Commission is required to:

1) Adopt "prescriptive" building standards for lighting, insulation, and climate control. These standards require buildings to have, for example, insulation of a particular rating (e.g., R-19), or a heating and air conditioning system with a specific rating in Btu's/hour.

2) Adopt "performance" standards for residential and non-residential buildings. These standards specify allowable energy consumption per square foot of floor space.

3) Adopt efficiency standards for those appliances which consume a "significant amount of energy on a statewide basis" (Section 25402c). The Commission has adopted standards for air conditioners, refrigerators, freezers, water heaters, space heaters, and plumbing fixtures.

4) Adopt standards to guide utilities' load management efforts.

5) Recommend standards for power plant efficiency.[6]

The standards relating to building design and construction must be no more costly than "historical" construction techniques would be

when compared over the economic life of the building. The appliance efficiency standards must be technically feasible and must not increase consumers' costs over the life of the appliance. The load management standards must be technically feasible and no more costly than new electrical capacity.

The building and appliance industries have initiated legal challenges to the Commission's standards,[7] and have charged that the Commission's authority to issue such standards is open-ended; that is, the Commission has substantial discretion over what devices will be subject to standards.

The Commission's conservation efforts affect the Commission's planning, forecasting, and siting activities. The previous section discusses the recent changes to the Warren-Alquist Act which specify that the forecast is assumed to include all reasonable conservation measures. These changes also specify that the need for new power plants is determined on the basis of the 5- and 12-year forecasts. The success of the Commission's conservation efforts may, therefore, influence the need for new facilities.

The Public Utilities Commission (PUC), the Department of Housing and Community Development (HCD), and local governments all have a role in implementing conservation measures. The PUC's activities overlap the Commission's in certain areas and, therefore, are discussed in the section on the Commission's relationship with other agencies. Prior to the Warren-Alquist Act, HCD had responsibility for building efficiency standards.

HCD continues its involvement in this area through contracts with the Commission. Local governments enforce the Commission's standards and may also develop their own conservation mandates.

Power Plant Siting

The Commission's power plant siting process is contained in Public Resources Code Sections 25500 through 25542. The Commission's authority to certify electricity-generating facilities applies to thermal power plants with a capacity of at least 50 MW and to the appurtenant facilities.

The siting process is divided into two stages: (1) the Notice of Intention (NOI), which lasts 12 months, and (2) the Application for Certification (AFC), which generally lasts 18 months. For geothermal facilities and some alternative technologies, the entire process lasts from 9 to 12 months. The two stages are described below. These cases are adjudicated by a committee of the Commission comprised of a presiding member and one additional Commissioner.

The Notice of Intention

A utility proposing to build a power plant or an electric transmission line must submit a NOI to the Commission. The purpose of the NOI is to allow the Commission to make a preliminary determination of whether the proposed site for the facility is suitable and whether the proposed facility is needed according to the Commission's adopted demand forecasts.

The NOI must contain at least three alternative sites. At least one site must be located outside the coastal zone. The NOI

must also contain a description of the proposed sites; a summary of the design criteria of the facilities; the types of fuel to be used; a preliminary statement of the relative economic, technological, and environmental advantages of the facilities at each site; and a statement of the need for the facility based on the Commission's most recent Biennial Report.[8]

If the Commission staff determines that the NOI is incomplete as filed, the NOI is returned to the applicant with a statement of its deficiencies.

When the Commission accepts a NOI, the "clock starts" on the 12-month time requirement for a NOI decision. The Commission published a summary of the NOI in a newspaper in each county where the proposed sites are located. The Public Utilities Commission and other state, local, and federal agencies having an interest in the proposed facilities also receive a copy of the NOI.

Chapter 1013, Statutes of 1978 (SB 1859, Alquist) divided the NOI hearings into two phases. During the first phase, which lasts six months, the Commission holds: (1) public informational presentations in the counties in which the proposed facilities are located; and (2) nonadjudicatory hearings.

The informational presentations provide "knowledge and an understanding of the proposed facilities and sites".[9] The nonadjudicatory hearings provide the public and government agencies an opportunity to participate in an informal setting without concern about strict legal requirements and cross-examination. They also provide for general comments from concerned

parties about the environmental, public health, safety, economic, social, and land use effects of the proposed facilities, as well as information about alternative sources of electrical generating capacity.

Following the nonadjudicatory hearings, the Commission must prepare a "summary and hearing order" which:

1) Identifies issues for consideration in the second phase of the NOI (i.e., adjudicatory hearings).

2) Identifies issues which may be eliminated from further consideration during the NOI.

3) Identifies issues which should be deferred until the AFC stage.

4) Makes proposed findings on matters relevant to the Commission's final report on the NOI.[10]

The second six-month phase of the NOI begins with adjudicatory hearings. These hearings provide a record upon which the Commission can base its NOI decisions. Following the adjudicatory hearings, the Commission must issue its final report on the NOI. The final report must contain:

1) The Commission's findings and conclusions regarding the conformity of the proposed sites with the 12-year forecast in the Biennial Report and with applicable local, state, and federal laws, including state and regional long-range land use plans.

2) Findings of the Coastal Commission and BCDC.

3) The Commission's findings on the acceptability and relative merit of each proposed site.

4) The Commission's findings and conclusions on the safety and reliability of the facilities at each site.[11]

The Commission must hold hearings on the final report.

The Commission may not approve the NOI unless the final report shows that two proposed sites are acceptable, unless the applicant has made a good faith effort to find alternative sites and only one site is acceptable. The Commission's written decision on the NOI is due no later than 12 months after the NOI is accepted.

NOI's are not required for some power plants. These include:

1) Geothermal power plants which can provide "commercial quantities" of geothermal resources.
2) Thermal cogeneration facilities up to 300 MW.
3) Thermal power plants feasible only at the energy source.
4) Modifications of existing facilities.
5) New thermal power plant technologies up to 300 MW.
6) Any thermal power plant up to 100 MW.[12]

Application for Certification

Although the Commission has received and processed several NOI's, only one proposed power plant has proceeded to the AFC stage.[13] The AFC process, therefore, is not as well defined as the NOI process.

In general, the technical details of a proposed power plant and related facilities are considered during the AFC stage. The AFC must contain a detailed description of the design, construction, and operation of the proposed facility, including safety and reliability information; site maps containing geologic,

environmental, and demographic data; a statement of need for the facility, generating capacity, plant life and fuel costs; and a description of cost and routes of transmission lines associated with the facility.[14]

When the Commission receives an AFC, it must initiate the process of complying with the California Environmental Quality Act (CEQA). The Commission acts as the lead agency responsible for the preparation of an environmental impact report (EIR) under CEQA. The EIR must be completed within one year after the AFC is received.

Within 90 to 240 days (i.e., three to eight months) after the AFC is filed, the Commission must begin public hearings in either Sacramento, San Francisco, Los Angeles, or San Diego, whichever is nearest to the proposed site. Additional hearings may be held in the county in which the proposed facility is located. Within 18 months after the AFC is filed, the Commission must issue a written decision on the AFC.

In the written AFC decision, the Commission must include:

1) Provisions stating how the design, siting and operation of the proposed facility protect the environment and assure public health and safety.

2) Provisions, where applicable, to meet the requirements which the Coastal Commission and BCDC may specify.

3) The facilities' conformance with all applicable construction standards and applicable state, federal and local laws.

4) Provisions for restoring the site for environmental purposes if the AFC is denied.

5) Conformity of the facilities with the 12-year forecast in the Biennial Report.[15]

The Commission is prohibited from certifying any facilities which:

1) Add generating capacity to a multifacility site in excess of the maximum allowable capacity as specified in the NOI.

2) Conflict with state or local laws or standards (e.g., state air quality standards) unless certification is required for the public convenience and necessity.

3) The Coastal Commission or BCDC designate as unsuitable pursuant to their respective mandates.

4) Are in specified environmentally sensitive areas.

5) Nuclear power plants, under specified conditions.

The Commission's decision on any AFC is subject to judicial review.

For geothermal power plants, the time requirement for an AFC decision is 12 months. As stated previously, NOI's are not necessary for all geothermal facilities. If a NOI is filed and approved, however, the AFC decision time is shortened to nine months. Three alternative sites are not required in either a NOI or an AFC for geothermal facilities.

The Commission may also approve county programs for certifying geothermal facilities. Once approved, county programs supersede all of the Commission's procedures for certifying geothermal facilities. The Commission may revoke its approval of a county's program under specified conditions, however.

In both the NOI and AFC stages, the Commission has the authority to review, with comments from the PUC, the relative economic, financial, and rate impacts of a proposed facility!

Research and Development

The Commission's mandates for research and development are intended to develop alternative energy resources and to reduce the state's dependence on any one particular energy resource. The Commission's basic mandate is to develop and coordinate a research and development program in "energy supply, consumption, conservation, and the technology of siting.[16] The Commission is required to carry out technical assessment studies on "all forms of energy and energy-related problems, in order to influence federal research and development priorities and to be informed on future energy options and their impacts."[17] The Commission is specifically required to do technical assessments of alternative energy sources, such as solar and geothermal, advanced nuclear power concepts, coastal and offshore siting, the use of waste water for power plant cooling, modes of transportation, recycling of materials, the use of waste heat, and the use of agricultural products and municipal waste as energy sources. The Commission must submit each year for the Governor's budget an "integrated program of proposed research and development".[18]

The Commission's research and development efforts have concentrated on renewable energy resources. For example, the Commission has developed standards and testing criteria for solar energy systems. Solar systems must meet these criteria in order to qualify for the state's 55% solar energy tax credit. The Commission will also publish a design manual for builders wishing

to use solar devices in new construction. Recent legislation (Chapter 1367, Statutes of 1978) requires the Commission to conduct a statewide design competition to select outstanding examples of residential buildings using passive solar architecture.

Recent legislation also expanded the Commission's role in promoting wind energy and simplified the Commission's siting process for geothermal, cogeneration, and experimental thermal power plant designs.[19]

Amendments to the Warren-Alquist Act

The Legislature has amended the Warren-Alquist Act since 1975 to correct problems which arose during the application of the Act's mandates (e.g., power plant siting delays) and to clarify the state's policy regarding energy supply and conservation options. The most important modifications are discussed below.

The Legislature passed three laws in 1975 (Public Resources Code, Sections 25524.1, 25524.2 and 25524.3) which discourage, for the time being, the development of nuclear power in California. These laws specifically prohibit the Commission from certifying nuclear power plants unless the federal government has identified, and there exists, technologies for (1) (Section 25524.1) reprocessing nuclear fuel rods (this law applies to nuclear plants which are designed to use reprocessed fuel), and (2) (Section 25524.2) disposing of high-level nuclear waste. Section 25524.3 requires the Commission to study the feasibility of placing nuclear power plants underground for safety reasons and

prohibits the Commission from certifying nuclear plants until the study is completed. The Commission completed the study in July 1978. The Commission concluded that design features which are cheaper than undergrounding are equally effective for insuring safety.[20]

Chapter 1013, Statutes of 1978 (SB 1859-Alquist), contains the most significant changes which have been made to the Warren-Alquist Act. This legislation implements regulatory reforms which both the Commission and the utility companies found necessary. Specifically, Chapter 1013:

1) Shortened the Notice of Intention stage of power plant siting from 18 to 12 months and divided the NOI into two phases: informational presentations and nonadjudicatory hearings; and adjudicatory hearings.

2) Eliminated the requirement that the Commission must determine the "accuracy and acceptability" of utility forecasts. The Commission still assesses the utility forecasts and adopts its own forecast.

3) Changed the content of the Biennial Report to make the Report the state's central working document for energy supply and demand issues. The forecast, which is in the Biennial Report, is now assumed to include all reasonable conservation measures available. The Report also contains the Commission's assessment of alternative technologies. This assessment helps the Commission to focus in the NOI on those alternatives which are commercially available.

Chapter 1010, Statutes of 1978 (SB 1805-Joint Committee on the State's Economy) allows utilities to bypass the NOI process for the following technologies: cogeneration facilities up to 300 MW; modifications to existing facilities; thermal power plants feasible only at the energy source; thermal power plants

less than 100 MW; new thermal power plant technologies up to 300 MW.

Chapter 1271, Statutes of 1978 (AB 2644-Goggin) changes the siting process for geothermal facilities. Primarily, this chapter shortens the Application for Certification process from 18 to 12 months for geothermal facilities, and makes the NOI optional in certain cases. This chapter also allows the Commission to certify county geothermal development programs which supplement the Commission's siting procedures for geothermal facilities.

RELATIONS WITH OTHER AGENCIES

Although the Warren-Alquist Act intended to make the Commission the single regulatory agency for energy issues, other state agencies maintain energy-related regulatory functions. In general, these agencies are "single purpose" agencies (e.g., the Air Resources Board) whose authority to issue permits affects the power plant siting process. This section on the Commission's relations with other agencies discusses the general powers of these agencies and areas where their authority conflicts with the Commission's authority.

Energy-Related Functions of the Air Resources Board

General Authority

Air quality regulation in California is divided between the Air Resources Board (ARB) and local Air Pollution Control

Districts (APCD). The ARB has authority to divide the state into air basins (Health and Safety Code Section 39606a) and to adopt ambient air quality standards for each basin (Section 39606b). The ARB is also the air pollution control agency for all purposes set forth in federal law (Section 39602). The APCD's must achieve and maintain state and federal air quality standards (Section 40001). In general, the ARB may assume the authority of an APCD if the APCD is not performing its duties adequately (Section 41505). The ARB also provides assistance to APCD's which do not have sufficient staff and financial resources.

Specific Procedures

The ARB exercises influence over the power plant siting process through its authority to prepare the State Implementation Plan (SIP) for meeting federal ambient air quality standards (Section 39602). The SIP contains New Source Review (NSR) rules which APCD's use in deciding whether to issue permits for new air pollution sources. The federal Clean Air Act of 1970 required states to prepare SIP's. California currently has a SIP, a part of which was prepared by the U.S. Environmental Protection Agency (EPA) which must approve SIP's. In 1977, amendments to the Clean Air Act required states to revise their SIP's. The ARB must submit the revised SIP to the EPA in January 1979. Federal law requires that California, through its SIP, meet all federal ambient air quality standards by 1982,

with a possible extension until 1987 for oxidant and carbon monoxide pollutants.

The APCD's influence over power plant siting is exercised through the issuance of "Authority to Construct" permits. According to the ARB, it is currently illegal to construct a thermal power plant in California without obtaining a permit from the local APCD.[21] NSR rules, which the APCD's use in permit decisions, may vary between APCD's, but all NSR rules are subject to ARB approval. The NSR rules specify that: (1) new stationary pollution sources must use the Best Available Control Technology (BACT), and (2) new sources may not contribute to violations of either federal or state[22] ambient air quality standards or to violations of the federal Prevention of Significant Deterioration (PSD) increments in certain sensitive areas. (These areas are designated Class I, II, or III; Class I areas are the most sensitive, e.g., national parks.)

In cases where a new source would violate state or federal ambient air quality standards, the NSR rules allow the APCD's to approve the source if the applicant offers emissions trade-offs; that is, the source proponent must take responsibility for decreasing air pollutants from existing sources in the area so that air quality, including emissions from the new source, improves. In some cases, interdistrict trade-offs are allowed.

Conflicts Between the ARB/APCD's and the Energy Resources Conservation and Development Commission (Commission)

Jurisdictional Issues

The ARB/APCD authority to issue permits for power plants has not meshed well in the past with the Commission's power plant siting process. No mechanism existed for coordinating the time requirements of the ARB/APCD permit process with the Commission's 36-month certification process.[23] The ARB and the Commission, however, have drafted an agreement specifying each agency's role in the siting process (see Section 4, p. 60). The following discussion provides background on the jurisdictional conflicts which led to the agreement.

The Warren-Alquist Act gives the Commission the "exclusive authority to certify all [power plant] sites and related facilities in the state". Section 25500 also states that a Commission power plant certificate is "in lieu of any permit..." required by any other state agency "to the extent permitted under federal law". The Commission committee reviewing Pacific Gas and Electric's (PG&E) proposed coal-fired power plant has argued[24] that Public Resources Code Section 25500 gives the Commission, instead of the ARB, the authority to issue air quality permits for power plants. The ARB disagrees.[25] The ARB argues that because it has authority to prepare the federally-required SIP, and the federal Clean Air Act requires that the SIP contain a permit process for new stationary pollution sources, the APCD's, in conjunction with the ARB, are, therefore, issuing

permits under the aegis of federal law. Thus, the Commission's authority to issue "in lieu of" permits does not apply because that authority exists only to the extent allowed by federal law.

The question is: Which agency should have authority to issue air quality permits for power plants? A recent opinion of the California Legislative Council sheds light on this question. The opinion makes the following points:

> Under current state and federal law, the Energy Resources Conservation and Development Commission could be the permitting authority for thermal power plants, under the federal Clean Air Act, only if the State Implementation Plan under such act is revised to specify the Commission as the agency to function in this capacity, subject to the approval of the Administrator of the Environmental Protection Agency.
>
> The Administrator's regulations under the Clean Air Act permit a state to divide its permitting functions among agencies with expertise in the respective areas involved, such as thermal power plants and air pollution generally. However, the Administrator does have broad approval and review powers over State Implementation Plans (see 42 U.S.C. 7410, 7424, and 7502 to 7504, incl.).
>
> Consequently, in our opinion, the Legislature, by statute, could designate the Commission as, or require that the Commission be, the permitting authority for thermal power plants under the Clean Air Act; but such a designation, as part of the plan, would be subject to review and approval of the Administrator.
>
> There is no prohibition in the Clean Air Act against a state dividing responsibility for preparation of the State Implementation Plan among various agencies with expertise in respective areas. However, as a practical matter, there would have to be some ultimate authority to decide any conflicts between the agencies involved, and an agency representing "a state," in our opinion, would necessarily have to present the plan as an integrated whole to the Administrator, with all conflicts in its provisions resolved (e.g., see 42 U.S.C. 7410).[26]

Whether the EPA would be willing to designate the Commission, or another agency, as the air quality permitting authority for power plants under the SIP is not known. The EPA may be unwilling to allow the state to bifurcate air quality permitting authority in the SIP. Furthermore, the Clean Air Act requires an "environmental" agency at the state level to prepare the SIP; the Commission is not an "environmental" agency.

The existence of state ambient air quality standards has been another source of conflict in air quality regulation. Federal law requires only that the SIP contain methods for meeting federal air quality standards; there is no requirement that the SIP contain methods for meeting the more stringent state standards. The ARB, however, intended originally to include in the SIP measures for meeting state standards. The rationale behind this move was that utilities and APCD's would have to deal only with one set of standards. Moreover, the methods for meeting standards would become "federalized" and, therefore, subject to stronger enforcement than the state could provide. The ARB has no doubts, depending on the site, about the ability of new power plants to meet the state standards.

The ARB decided recently, however, that the SIP will not contain methods for meeting state standards because utilities and manufacturers expressed concern that federalizing the state standards would mean that, even in an emergency situation, the state could not override its own air quality standards. Whether this concern is real or perceived is unclear, however. Regardless

of what is in the SIP, the EPA may hesitate to enforce any air quality standards which exceed federal requirements.

Emissions Control

The Commission siting procedure has been complicated by a lack of coordination with the ARB on mitigation measures for emissions from power plants. For example, APCD's can define Best Available Control Technology (BACT) for power plants within their jurisdiction. The result is that BACT definitions are made on a case-by-case basis and, therefore, have been called a "moving target". The Commission has been unable to specify in its siting process what BACT is for a particular electricity-generating technology.

Trade-off requirements have also been a moving target. The ARB's policy has been that emission reductions may not be counted as trade-offs if the reductions are necessary to comply with proposed federal, state, or district rules and regulations. Thus, every time a district proposes a new regulation, the available trade-offs decrease and the baseline against which trade-offs are measured may change. There has been no way to fix the available trade-offs within the Commission's siting procedure, but recent NSR rules allow the purchase of trade-offs when a NOI is filed. Although the ARB does not have responsibility for energy conservation programs, its regulations affect energy efficiency in automobiles, industrial processes, and electric power generation. The ARB could also require conservation measures as a method of improving air quality.

The ARB prepares forecasts of industrial growth in each air basin to estimate the effects of air quality standards on various industrial growth scenarios. These forecasts in turn could affect electricity demand. For example, the ARB's forecast may indicate that air quality standards will limit growth of a particular industry. Energy demand, therefore, may be reduced. The Commission and the ARB currently do not coordinate their respective forecasting efforts. The Commission and the ARB also use different forecasting methodologies.

Agreement Between the ARB/APCD's and the Commission

The agreement provides for increased cooperation between the Commission and the ARB in deciding on the compliance of power plants with state and federal air quality standards. Two significant features of the proposed agreement are:

a) The ARB/APCD review of a proposed power plant would take place during the Commission's siting procedure. The agreement requires the applicant to submit during the notice of intention (NOI) stage, instead of the application for certification (AFC) stage, most of the detailed information which the ARB/APCD's need to determine whether a proposed power plant can be built at a particular site.

b) If a proposed power plant cannot meet all applicable state air quality standards, the Commission can still certify the facility if, among other conditions, it meets federal air quality standards.

The agreement applies to all power plants for which an APCD must issue an Authority to Construct permit. Its provisions will go into the Commission's administrative regulations governing NOI and AFC proceedings. The provisions of the agreement

will also be part of the NSR rules in the SIP. The agreement is summarized below.

Notice of Intention Stage

During the first phase of the NOI proceedings, the APCD or the ARB must submit a report to the Commission. The report would include:

1) A "preliminary specific" definition of Best Available Control Technology (BACT).

2) A preliminary discussion of whether there is a "substantial likelihood" that the plant can be approved at each site proposed in the NOI.

3) A preliminary list of federal and state air quality regulations which the plant must meet.

If none of the proposed sites is acceptable from an air quality standpoint, the ARB/APCD's may suggest, prior to the end of the nonadjudicatory hearings in the first phase of the NOI, an alternative site where the proposed facility is more likely to meet air quality standards. In such cases, the Commission may direct the NOI applicant to evaluate "major siting constraints" for presentation during the second (i.e., adjudicatory hearing) phase of the NOI.

In its NOI decision, the Commission may not approve any site unless there is a "substantial likelihood" that applicable air quality standards can be met at the site. If no such site is identified, and the Commission determines that a facility is needed, it may select a single site that is most likely to meet air quality standards.

Application for Certification Stage

Within nine months of the time an AFC is filed (six months if a 12-month AFC applies), the AFCD must submit its "final determination of compliance". If the proposed facility complies with air quality standards, the local Air Pollution Control Office (APCO) specifies permit conditions, including BACT and, if necessary, emissions trade-offs. If the facility does not comply, the APCO would specify those rules and regulations which the facility violates and those with which it complies. The APCO's final determination is subject to appeal to the ARB.

The Commission's AFC decision must include "findings and conclusions" on the facility's conformance with air quality standards, based on the APCD's final determination. If the facility complies, the Commission's certificate must include all conditions necessary to maintain compliance. If the facility does not comply, the Commission mediates between the applicant and the ARB or APCD to "correct or eliminate" the noncompliance. If the noncompliance cannot be corrected, the Commission may certify the facility if the following conditions are met:

1) The Commission determines that the facility is required for the "public convenience and necessity".

2) There are not more "prudent and feasible means of achieving the public convenience and necessity".

3) The facility meets all "provisions and schedules required by the Clean Air Act" (i.e., federal standards).

4) The facility meets all applicable air quality standards that can be met.

The APCO must issue a "permit to operate" if the facility complies with the conditions in the Commission's certificate.

Energy-Related Functions of the Public Utilities Commission[27]

General Authority

Article XII of the California Constitution creates the Public Utilities Commission (PUC) and provides for the PUC's authority over energy-producing facilities. Sections 3, 5, and 6 give general authority to the PUC and to the Legislature for the purpose of regulating entities which provide power to the public. The PUC is given specific constitutional authority to fix rates and establish rules for all public utilities.

Section 701 of the Public Utilities Code provides the general statutory authority to regulate public utilities. The PUC does not regulate municipally-owned utilities.

Specific Procedures

1) Ratemaking

The PUC is charged with setting "just and reasonable" rates for public utilities' services (Public Utilities Code, Section 728). The California Supreme Court, in Pacific Tel. & Tel. v. Public Utilities Commission (1965) described the PUC's general approach to ratemaking:

> ...to determine with respect to a 'test period' (1) the rate base of the utility, i.e., value of the property devoted to public use, (2) gross operating revenues, and (3) costs and expenses allowed for rate-making purposes, resulting in (4) net revenues produced, sometimes termed 'results of operations'. Then, by determining

> the fair and reasonable rate of return to be fixed or allowed the utility upon its rate base, and comparing the net revenue which would be achieved at that rate with the net revenue of the test period, the commission determines whether and how much the utility's rates and charges should be raised or lowered...

A utility initiates a rate case by filing an application with PUC. After an adjudicatory hearing, including sworn testimony and cross-examination, the PUC's decision is made by a majority vote of the five commissioners. After possible rehearings, the PUC's decision is appealable only to the California Supreme Court. The public is given an opportunity to participate in rate cases through informal hearings held in several locations within the area served by the utility seeking the rate increase.[28]

The PUC has also developed special ratemaking procedures which provide for rate adjustments outside of general rate proceedings. These procedures were initiated because rising fuel costs and inflation have complicated general rate proceedings to the point where utilities experienced a lag time in PUC rate adjustments.

2) Certificates of Public Convenience and Necessity

Public Utilities Code Section 1001 requires every gas and electric corporation under the PUC's jurisdiction to obtain from the PUC a Certificate of Public Convenience and Necessity (CPCN) before constructing facilities.[29]

In the past, the PUC's review of a utility's proposal prior to issuing the CPCN constituted the power plant siting procedure. Currently, however, the Energy Commission's (Commission) siting procedure supplants most of the PUC's siting jurisdiction. Although utilities must still obtain a CPCN, the PUC's siting jurisdiction is limited to the implications of a proposed project on a utility's financial standing and to the rate implications of a proposed project. Thus, using these two criteria the PUC may reverse the Commission's decision to site a power plant by refusing to issue the CPCN. For example, the PUC could decide that a power plant which the Commission has certified will bankrupt the utility or impose an unfair burden on ratepayers. To avoid this possibility, the PUC participates in Commission proceedings which will eventually require a CPCN.

The PUC retains exclusive jurisdiction over electric transmission lines not directly related to power plants, and over all intrastate natural gas facilities. Only about 10% of California's gas is categorized as intrastate gas, however. The PUC also has exclusive authority to certify power plants which California's investor-owned utilities choose to build outside the state.

PUC decisions on applications for a CPCN are made in formal hearings involving a commissioner and an administrative law judge. The PUC maintains that these formal proceedings are necessary in order to develop a record which will support PUC decisions if the decisions are appealed to the California Supreme Court.

In deciding on whether to issue a CPCN, the PUC must comply with the provisions of the California Environmental Quality Act (CEQA).

3) Forecasting

As part of every general rate case, the PUC conducts short-term forecasts (i.e., one or two years) of energy supply and demand. The PUC also conducts a three-year forecast of natural gas supply and demand on a semiannual basis for use in gas rate cases.

The PUC conducts long-term natural gas forecasts (10-20 years) in connection with its responsibilities to assure an adequate supply of natural gas. The PUC's 10-year gas forecast is published annually. Although utilities are also required to submit their own 10-year gas forecasts to the PUC, the PUC maintains that its forecast is an "independent assessment of supply and demand".[30]

In carrying out its responsibilities concerning an adequate supply of electricity, the PUC relies on

the Commission's long-range electricity forecasts. Recently, however, the PUC issued an Order Instituting Investigation (OII) concerning the resource plans of both San Diego Gas & Electric Company (SDG&E) and Pacific Gas & Electric Company (PG&E). According to the PUC, these investigations (OII's No. 4 and 26, respectively) are not intended to duplicate the Commission's forecasting plans; the PUC maintains that these investigations will help the PUC participate meaningfully in future Commission proceedings by "providing comments on financial and rate impacts of proposed facilities".[31] The PUC is also required (Public Resources Code Sections 25302, 25303) to evaluate the 5-, 10-, and 20-year forecasts which utilities submit to the Commission. The Commission uses these forecasts in preparing the Biennial Report.

4) The PUC is generally responsible for the conservation efforts which affect utilities. These responsibilities include:

   -- Setting utility rates, including inverted rate structures, to reward customers who reduce their energy consumption.

   -- Establishing tariff rules to reduce waste and non-essential uses of electricity.

   -- Determining appropriate levels of utility expenditures for cost-effective energy conservation.

-- Developing and adopting a utility Home Insulation Assistance and Financing Program.

-- Determining appropriate rules and general orders governing utility service quality including voltage standards.

To implement these functions more effectively, the PUC established an Energy Conservation Team on January 1, 1976. The team is now part of the PUC's Utilities Division.

The PUC uses its rate jurisdiction as an enforcement mechanism for utility conservation efforts. The PUC may recommend a reduced rate of return if a utility does not demonstrate vigorous, imaginative and effective conservation efforts. The PUC claims that its conservation program has caused utilities to expand substantially their conservation activities during the past two years.[32] Unfortunately, there is no formal method for incorporating utilities' conservation efforts into the Commission's procedures.

The Commission also has statutory authority over energy conservation. In general, the Commission concentrates on non-utility conservation efforts such as insulation standards, home appliance efficiency, residential and nonresidential building standards, and transportation. The Commission has promotional responsibilities in conservation, such as domestic outreach

and educational programs. The Commission also intervenes in the PUC's conservation proceedings.

5) Load Management

Although the Commission has general authority to adopt cost-effective load management standards (Public Resources Code Section 25403.5), the PUC has a role in implementing the standards. For example, load management may require a "time of use" rate structure which the PUC must approve. Through its rate jurisdiction in such cases, the PUC also determines whether a particular load management technique is cost-effective.

6) Alternative Energy Sources

a. Solar Energy

PUC policy on solar energy is just now emerging. Through its ratemaking authority the PUC can provide incentives for solar development by, (1) providing higher rates of return for utilities investing in solar energy (Public Utilities Code, Section 454), or (2) by offering higher gas service priorities to customers who use solar equipment. The PUC's authority to adopt lifeline rates for gas and electricity also affects solar development. Lifeline rates determine whether solar energy is economical for some applications.

PUC regulation of utility involvement in solar energy is unclear. The PUC and Commission recently held joint hearings on utility involvement in solar energy; the PUC now intends to hold additional hearings on its own. Currently, utilities are required to obtain PUC approval before marketing solar equipment (Chapter 1102, Statutes of 1978). The PUC is also required to investigate the feasibility of a solar energy loan program (Chapter 1100, Statutes of 1978).

b. Cogeneration and Geothermal

As with solar energy, the PUC's jurisdiction over rates and utilities' returns on investments gives the PUC leverage to encourage the use of cogeneration and geothermal energy.

The PUC recently required PG&E, Southern California Edison, and SDG&E to submit rate proposals to increase cogeneration and to identify their respective potential for cogeneration projects. The PUC subsequently issued a report which identified 1,650 MW of cogeneration potential in the service areas of the three utilities.

7) Electric Transmission Lines

The PUC has jurisdiction over electric transmission lines not related specifically to power plants. The

Commission has jurisdiction over transmission lines from power plants to the first junction with an interconnected grid.

In practice, the PUC and the Commission have disagreed on the extent of their respective jurisdictions.[33] The disputes are based on the definition of the junction with an interconnected grid.

8) Review of Utility Research and Development Plans

In the past, the PUC generally did not allow utilities to use ratepayer's money for R&D. Within the past five years, however, the PUC has taken a different view of R&D, mostly as a result of dwindling energy resources. Now utilities are allowed reimbursement through rates for part of their R&D investments. The PUC obviously can influence the R&D priorities of utilities by specifying which investments will be reimbursed. PU Code Section provides the authority for reimbursement for R&D through rates. Section 454 allows an increased rate of return for utilities investing in specified alternative energy projects.

Conflicts Between PUC and Commission

1) Siting

Both the Public Utilities Commission and the Energy Commission issue certificates for power plants. As

stated previously, the PUC can deny a CPCN after the Commission has issued its certification. Thus, a utility can spend considerable time and money during the Commission's certification process only to have the PUC deny approval of the project. The PUC must coordinate its review with the Commission's siting process to provide an early decision on whether the utility can finance its proposal. Although the PUC is updating General Order (G.O.) 131a[34] in an effort to provide better Commission/PUC coordination in the siting process, the CPCN may still add several months to the time required for approval of projects.

The PUC's investigations of utilities' resource plans (OII's No. 4 and 26) may duplicate parts of the Commission's planning process. As stated previously, recent legislation appears to have expanded the Commission's role in resource plans.

The PUC is in a position to influence state energy policy. For example, the PUC has adopted the policy that the state should use natural gas in power plants until a transition can be made to alternative energy sources. This policy appears to conflict with current Commission policy which appears to favor coal and oil.

Energy-Related Functions of the State Water Resources Control Board[35]

General Authority

The State Water Resources Control Board (SWRCB) and nine regional water control boards share responsibility for regulating water quality in the state. The SWRCB has additional authority to administer water rights. The general statutory authority of

the SWRCB and the regional boards is stated in Public Resources Code Sections 13150 et seq.

Specific Procedures

1) Water Quality

The SWRCB's energy-related functions, as well as jurisdictional conflicts with the Commission, can be illustrated through the following examples.

Example One: A utility discharging "once through" cooling water to surface water must, under federal law (Clean Water Act), obtain a National Pollutant Discharge Elimination System (NPDES) permit. The SWRCB and the regional boards are the only agencies which the EPA authorizes to issue NPDES permits.

Thermal pollution is the principal concern in once-through cooling water discharges. Although the NPDES permit can include limits on the discharge of heat, the federal government has not developed thermal pollution standards. The state, however, has developed stringent thermal pollution standards which are contained in the SWRCB's federally-required Thermal Plan. Thus, NPDES permits reflect state thermal pollution standards which have become "federalized" in the Thermal Plan. A question may arise whether the Commission has statutory authority to override the NPDES permit conditions. This jurisdictional issue probably will not arise for inland power plants which do not use once-through cooling water.

A similar jurisdictional problem concerns the federal requirement that cooling water intake structures use the "best technology for minimizing adverse environmental impact[s]" on fish and other organisms. This requirement applies to both fresh water and ocean water intake structures. The Commission may have authority under state law to adopt a different definition of "best technology" than the SWRCB adopts.

These examples demonstrate that the SWRCB and the regional boards occupy a position regarding water similar to the ARB/APCD's position with respect to federal law regarding air quality.

Example Two: Some large power plants use evaporation ponds to dispose of cooling water. Although a NPDES permit is not required for evaporation ponds, a permit is required under state law because of possible adverse effects on the quality of groundwater. The SWRCB and the regional boards are authorized to administer this permit program. A question arises, however, whether the Commission has the authority to issue this permit for power plants. The SWRCB indicates that its cooperation with the Commission has prevented any jurisdictional conflicts over this issue.

Example Three: The SWRCB, through its Clean Water Grants Program, funds sewage treatment facilities. The

SWRCB will make a special effort to coordinate the design of treatment facilities from which water can be reclaimed for power plant cooling, if the utilities' plans are available to the SWRCB as early as possible.

2) Water Rights

Before the SWRCB issues a right to appropriate surface water, including water for power plant cooling, it must make two findings:

a. There is sufficient water available after the requirements of prior water rights have been satisfied.

b. The intended use of water is reasonable, beneficial, and in the public interest.

Both of these findings require the SWRCB to exercise discretion. So far, the SWRCB has accommodated the Commission's power plant siting process in its water rights decisions; utilities usually secure rights to cooling water before submitting a notice of intention (NOI) to the Commission. Thus, the issue of whether the Commission, instead of the SWRCB, has the authority to administer water rights for power plants has not arisen.

The second finding offers additional opportunity for conflict, however. Article 2, Section X of the

California Constitution, which is the fundamental water rights law of the state, prohibits the waste or unreasonable diversion of water. Furthermore, the SWRCB's Power Plant Cooling Policy strongly discourages the use of fresh inland water for power plant cooling. The policy states that the loss of inland water through evaporation in a power plant cooling facility may be considered an unreasonable use of inland water when general shortages occur. Thus, the question may arise whether the Commission or the SWRCB has the ultimate authority to decide if the use of inland fresh water for power plant cooling is reasonable.

In his testimony before the Advisory Committee, Mr. William J. Miller, of the SWRCB, stated that the SWRCB and the Commission currently have a satisfactory, though informal, relationship in power plant siting cases. Miller suggested that the SWRCB's current statutory authority remain intact. Miller also stated that SWRCB is willing to have a member participate in appropriate portions of the Commission's proceedings.

Energy-Related Functions of the State Solid Waste Management Board

Although ACR 177 did not mention the Solid Waste Management Board (SWMB) as an agency whose authority conflicts with the Commission's, such conflicts may arise in two areas: (1) responsibility for developing waste-to-energy programs and facilities, and

(2) the issuance of permits for power plants which generate solid waste and store the waste at the power plant site.

Waste-to-Energy

The SWMB is responsible for developing a research and development program for recovering solid wastes and converting the wastes to energy (Government Code, Section 66785). "This program includes the design, construction and testing of pilot equipment for processing solid wastes.[36] The SWMB is also responsible for demonstrating the feasibility of recycling and converting agricultural wastes into synthetic fuels (Section 66786.5).

The Commission has similar responsibilities, including technical assessment studies on:

1) Methods of recycling, extracting, processing, fabricating, handling, or disposing of materials, especially materials which require large commitments of energy (Public Resources Code, Section 25602h).

2) Methods of recycling materials and its effect on energy consumption (Section 25602i).

3) Use of agricultural products, municipal wastes, and organic refuse as an energy source (Section 25602m).

The SWMB suggests that it should have full authority over research and development of waste-to-energy projects and that the Commission should have authority over research and development in crops grown specifically for fuel (i.e., biomass conversion).[37]

Permits for Solid Waste Disposal

If California relies on coal-fired power plants in the future, solid waste resulting from coal combustion may become an issue in power plant siting. For example, Pacific Gas and Electric's proposed coal-fired facility, Fossil 1 and 2, would generate more waste than disposal sites in the area can handle. Thus, the Fossil 1 and 2 site must have its own waste disposal area. Since all solid waste disposal areas must obtain permits from agencies other than the Commission, the question may arise whether the Commission has the authority to issue solid waste permits for power plants.

Both the regional water quality boards and the county solid waste enforcement agencies, with the approval of the SWMB, issue permits for solid waste disposal facilities.[38] The SWMB is not required to approve the regional boards' permits; the permits may be appealed to the SWMB. If hazardous solid waste, as defined by the federal Resources Conservation and Recovery Act of 1976 (RCRA) is involved, the Department of Health, instead of the county solid waste enforcement agency, issues a waste facility permit.

The regional water quality board permit and the county enforcement agency permit are issued under state law. Thus, Public Resources Code Section 25500 may give the Commission the authority to issue these permits for power plants. The Department of Health (DOH) permit for hazardous waste, however, is issued under the aegis of RCRA. Since the U.S. Environmental

Protection Agency (EPA) is generally unwilling to bifurcate its state-administered enforcement programs, the Commission probably could not issue this permit for power plants.[39]

Jurisdictional conflicts over solid waste have not been a serious problem in power plant siting cases. In the Sundesert nuclear facility siting case, a permit from the regional water quality board would have been required if the case had proceeded to the AFC stage. Since the Commission was willing to accept the regional board's permit conditions in the Sundesert case, the question of which agency issued the permit was immaterial.[40] In the Fossil 1 and 2 siting case, which is in the NOI stage (Docket No. 77-NOI-4), the nature of the solid waste is not sufficiently well-defined to determine if the waste is hazardous.

The Commission is trying to form a task force on solid waste permits for power plants. This task force, which would include the SWMB, the DOH, and the State Water Resources Control Board, would attempt to specify early in the siting process the information a utility must submit in order to comply with solid waste permit requirements.

Energy-Related Functions of the California Coastal Commission

General Authority

The California Coastal Commission has general authority over conservation and development in the coastal zone (Public Resources Code, Sections 30000 et seq.).

Specific Procedures

The Coastal Commission has no permit authority over power plants in the coastal zone. The Coastal Commission does have authority (Section 30413), however, to map the coastal zone in such a way that some areas are designated as unsuitable for power plants. These areas, which are known as "designated areas", are often valuable coastal resources and are generally unsuitable for power plants because of geographical considerations. The Big Sur coast is an example of a designated area. The Commission is prohibited by law from siting power plants in designated areas unless the Coastal Commission makes specific findings (Section 25526a).

During the mapping process, the Coastal Commission must consider the content of the Commission's most recent Biennial Report. Thus, the Coastal Commission is aware of the Commission's demand forecast when it maps the coast. Furthermore, the maps must be updated every two years. During the updating, previously undesignated areas may be designated and vice versa.

The Coastal Commission completed its mapping task in September 1978. According to the maps, designated areas comprise about one-quarter of the coast. About one-half of the coast is mapped in such a way that designated and undesignated areas are interspersed. The final quarter of the coast is undesignated. Of this final quarter, one-half is currently under federal ownership.

According to the Coastal Commission,[41] this mapping approach provides utilities with a hierarchy of possible choices for power

plant sites. Utilities should look first at areas of the coast where power plants already exist; the second choice should be the undesignated quarter of the coast; the third choice would be the interspersion of designated and undesignated areas; and the fourth choice would be designated areas.

The Coastal Commission may also participate in Commission siting proceedings. When a coastal power plant site is under consideration in a siting case, the Coastal Commission recommends terms and conditions for protection of coastal resources which the Commission must implement unless they are infeasible.

Conflicts Between the Coastal Commission and the Commission

Despite the existence of undesignated areas on the coast, a question remains whether the coastal power plant siting option, which implies the use of ocean water instead of fresh water, is available. The Warren-Alquist Act (Public Resources Code Section 25516.1) prohibits the Commission from certifying any facilities on a coastal site unless the coastal site has "greater relative merit" than alternative sites.[42] The term "greater relative merit" is not defined. Thus, given a choice between expanding facilities at a coastal site and constructing facilities at a new, inland site, the Commission could choose the inland site.

Another source of conflict between the Coastal Commission and the Commission is the Coastal Commission's classification of certain coastal areas as designated (i.e., unsuitable) for power plants but undesignated for other related uses, such as access to

seawater for a power plant further inland. In such "partially designated" areas, a utility could build seawater access facilities, for example, without the Coastal Commission's approval.

The Commission has expressed doubt about the legality of partial designation.[43] Whether the courts will interpret partial designation as identical with total designation is unclear. The issue probably will not be decided until a utility proposes to build facilities in a partially designated area.

Energy-Related Functions of the Department of Conservation

The Division of Oil and Gas in the Department of Conservation regulates activities associated with geothermal energy production. The Division regulates drilling, casing requirements, steam flow, and maintenance for geothermal wells. The Department has received a grant from the U.S. Department of Energy to expedite geothermal development in the state. The grant will allow the Department to investigate federal geothermal leasing practices; electrical transmission corridor access; local planning policies; low temperature, direct heat applications for geothermal steam; and incentives for geothermal development.

Energy-Related Functions of the Business and Transportation Agency

The SolarCal Office in the Business and Transportation Agency is seeking to provide financial and regulatory incentives for solar energy development. SolarCal is also trying to develop an effective consumer warranty insurance program for solar

equipment. The Office and the SolarCal Council, 38-member board appointed by the Governor, advises the Governor in solar energy issues. The Office and the Board are trying to develop a solar plan for California. The Office works closely with builders and financial institutions on solar projects and provides the "focal point" in state government for solar energy issues.

Energy-Related Functions of the Office of Appropriate Technology

The Office of Appropriate Technology (OAT) is part of the Office of Planning and Research. OAT was established by executive order to assist in and to encourage the development of small-scale technology and the use of renewable resources. OAT is currently involved in alternative energy projects concerning wind, solar, and biomass. OAT administers a program to provide grants to individuals developing small-scale technologies. OAT also provides information to the public on renewable energy resources.

Energy-Related Functions of the State Architect

The State Architect encourages the use of conservation measures and solar energy in state buildings.

This section on agencies' responsibilities demonstrates that several different agencies have authority to initiate research and development efforts for alternative energy technologies. This diverse responsibility is another example of the current lack of coordination in the state's energy-related functions.

FOOTNOTES

[1]California, Energy Resources Conservation and Development Commission, Power Plant Siting Policy Paper, November 1978, pp. 5-6.

[2]California Public Resources Code, Section 25304.

[3]Ibid., Section 25305.

[4]California, Energy Resources Conservation and Development Commission, Power Plant Siting Policy Paper, November 1978, p. 15.

[5]California Public Resources Code, Section 25401.

[6]Ibid., Section 25402.

[7]Residential and nonresidential building standards and appliance efficiency standards have been challenged.

[8]California Public Resources Code, Section 25504.

[9]Ibid., Section 25509

[10]Ibid., Section 25512.

[11]Ibid., Section 25514.

[12]Ibid., Section 25540.6.

[13]Pacific Gas and Electric Company's Potrero combined cycle facility.

[14]California Public Resources Code, Section 25520.

[15]Ibid., Section 25523.

[16]Ibid., Section 25601.

[17]Ibid., Section 25602.

[18]Ibid., Section 25604.

[19]Ibid., Sections 25611; 25540 et seq, 25540.6.

[20]California, Energy Resources Conservation and Development Commission, Underground Siting of Nuclear Power Reactor: An Option for California, June 1978.

[21]Testimony of Tom Austin, Executive Director, California Air Resources Board, before the Advisory Committee to the Joint Committee on Energy Policy and Implementation, Los Angeles, November 29, 1978.

[22]California's ambient air quality standards are currently more stringent than federal standards.

[23]Chapter 1013, Statutes of 1978, shortened the complete siting process to 30 months; 12 months for the Notice of Intention, and 18 months for the Application for Certification.

[24]California, Energy Resources Conservation and Development Commission, Committee Statement and Order on Air Quality, Docket NO. 77-NOI-4, 27 June 1978.

[25]California, Energy Resources Conservation and Development Commission, Response to Committee Statement and Order on Air Quality of 12 July 1978: Air Quality Items 3.d. and 4., 77-NOI-4, 15 August 1978.

[26]California, Legislative Counsel, Opinion No. 16183.

[27]This section is a condensation of the written statement which Frederick John, Executive Director of the PUC, presented to the Advisory Committee to the Joint Committee on Energy Policy and Implementation, November 16, 1978.

[28]Whether the PUC offers sufficient opportunity for public participation in its proceedings is currently an unresolved question.

[29]For electrical facilities, the CPCN requirement applies only to power plants with a capacity greater than 50 MW and to transmission lines over 200 kilowatts.

[30]California Public Utilities Commission, Statement of Frederick G. John, Executive Director, on Behalf of the Public Utilities Commission Before the Advisory Committee to the Joint Committee on Energy Policy and Implementation, November 16, 1978.

[31]Ibid.

[32]Ibid., p. 35.

[33]Ibid

[34]The update, which will be G.O. 131b, is scheduled to be issued in 1979.

[35]This section is based on the written statement and testimony which William J. Miller, member of the SWRCB, presented to the Advisory Committee, November 29, 1978.

[36]Letter from Jerold Prod, Chairman of the SWMB, to the Advisory Committee, November 16, 1978.

[37]Ibid.

[38]The regional water quality boards actually issue "waste disposal requirements" (Water Code, Section 13260).

[39]Telephone conversation with Harvey Collins, Ph.D., Acting Chief, Department of Health Services, Hazardous Materials Management Section, January 22, 1979.

[40]Telephone conversation with Harry Schueller, Acting Chief, Legal Division, State Water Resources Control Board.

[41]Testimony of William Ahern, Ports and Energy Coordinator for the California Coastal Commission, before the Advisory Committee, November 1, 1978.

[42]Public Resources Code, Section 25502.5 requires that utilities submit in a NOI at least one site not in the coastal zone.

[43]Testimony of Gene Varanini, Commissioner, California Energy Commission, before the Advisory Committee, November 1, 1978.

ADVISORY COMMITTEE

ACR 177 created a 12-member advisory committee to assist the Joint Committee in determining what changes, if any, should be made in the organization of the state's energy-related functions. The following persons served on the Advisory Committee:

Roy Alper
Director, California Citizens Action Group, Berkeley

Michael Eaton
Energy Coordinator, Sierra Club, Sacramento

David Fogarty
Senior Vice-President, Southern California Edison Company, Rosemead

Thomas Graff
Regional Counsel, Environmental Defense Fund, Berkeley

Joseph Houghteling
Chairman, Bay Conservation and Development Commission, Atherton

Frederick Mielke
Executive Vice President, Pacific Gas and Electric Company, San Francisco

Sandy Motley
Councilwoman, City of Davis, Davis

Michael Peevey
President, California Council for Environmental and Economic Balance, San Rafael

Phyllis Price
Energy Director, California League of Women Voters, Salinas

William Robertson
Executive Secretary-Treasurer, Los Angeles County Federation of Labor, Los Angeles

William Walbridge
General Manager, Sacramento Municipal Utility District, Sacramento

Leo Wyler
Chairman of the Board, TRE Corporation, Los Angeles

The Advisory Committee met six times. Most of the meetings were devoted to taking testimony from representatives of those state agencies whose authority affects the energy regulatory process. The Advisory Committee heard from (in order of presentation):

Gene Varanini, Commissioner
California Energy Commission

William Ahern
Ports and Energy Coordinator
California Coastal Commission

Frederick John, Executive Director
California Public Utilities Commission

William Miller
Member, State Water Resources Control Board

Tom Austin, Executive Director
Air Resources Board

Allen Pasternak, Commissioner
California Energy Commission

The Advisory Committee reached consensus on few issues. At first, the Advisory Committee appeared to be polarized -- half of the members sought substantial changes in the current regulatory process, including abolition of the Commission; the other half sought to maintain the Commission's integrity while implementing changes in the relationship between state agencies. At the November 29, 1978 meeting the members agreed, however, that subsequent discussions should address the question of whether there is a need in the state's energy-related functions for:

1. A well-articulated and understandable energy policy.
2. Greater certainty in the regulatory process including coordinated decisions by the California Energy Commission, the Air Resources Board, the Water Resources Control

Board, the Public Utilities Commission, etc.

3. Greater visibility in the supply planning.

4. Political accountability.

5. Increased public participation.

6. Less legalistic procedures in order to facilitate public participation.

Toward the end of the Advisory Committee's tenure, the members' opinions became diversified. Following the final meeting on January 3, 1979, each member submitted to the Joint Committee his or her individual recommendations on reorganizing the state's energy-related functions.

The Joint Committee received as a separate document a complete list of the issues on which the Advisory Committee voted at the final meeting, as well as each member's final statement. Those issues on which the Advisory Committee reached consensus at the final meeting are summarized below:

Conclusions

1) The existing organization of state government does not provide an articulate and understandable statement of state energy policy.

2) The existing organization of state government does not provide certainty and coordination in the regulatory process (i.e., forecasting, determination of technologies and fuel types, review of supply plans, selection of site for facilities).

3) Public participation in the Commission's proceedings, other than siting cases, is far from adequate.

4) The existing organization of state government does not provide for an adequate amount of political accountability.

Recommendations

1) As a general principle, two regulatory agencies should not perform the same regulatory function.

2) A Resources Management Council should be created by the Governor to help coordinate and ensure communication among executive branch agencies.

3) The Legislature should adopt a unified timetable for all findings, determinations and certificates necessary for the siting process.

ANALYSIS OF THE COMMISSION'S EFFECTIVENESS AND OF ALTERNATIVES FOR REORGANIZATION

In executing its energy-related responsibilities, state government performs three functions. The first function is establishing energy policy. The Governor and the Legislature currently assume this role. Second is articulating energy policy: Articulation refers to defining how policies will be carried out; it is a planning function. Third is implementing policy: State agencies are responsible for both policy articulation and implementation.

None of these functions may be performed effectively by itself. Energy policy cannot be carried to the implementation stage while conflicting policies and planning efforts exist. Thus, the state must assure that its energy policies are consistent with other resource policies and that all agencies' planning and implementation efforts are well coordinated.

This section will examine the following aspects of the state's energy-related responsibilities:

1) The consistency of the state's energy policies.

2) The degree of coordination in the state's energy planning efforts.

3) The degree of political accountability which the structure of the state's energy-related functions allows.

4) The internal organization of the Energy Commission.

5) The effectiveness of the state's efforts to develop alternative energy technologies.

6) Public participation.

7) The problems inherent in combining regulatory and administrative functions in one agency.

Energy Policy

The purpose of energy policy is to guide and direct governmental and private sector resources into areas which will benefit the public. State policy should provide the framework within which the various entities concerned with energy development and consumption can plan for the future. The state, therefore, must make its policy known. The policy must be articulated through plans and regulations, and implemented by the responsible agencies.

The Legislature and the Governor have established certain overall energy policies. It is clear that nuclear energy shall not be used until certain issues regarding the disposal of long-lived radioactive wastes are solved.[1] Geothermal energy, repowering of existing power plants (the conversion of an existing steam cycle plant to one with both a steam cycle and a gas turbine), power plants using other than commercially available technologies, and cogeneration plants have all received the de facto approval of the Legislature by reason of the special, expedited siting procedures which have been required for these sources.[2] The Governor and Legislature have also considered proposals to expedite the siting of coal-fired power plants.[3] Alternative technologies, such as solar energy, have received special tax incentives.

The Energy Commission, in its AB 1852 report, as well as in subsequent statements before the Legislature, has announced that coal and domestic California oil should be the base load fuels for the immediate future. The PUC, in its LNG decision, declared that natural gas should be the transition fuel to the solar energy society.[4] The ARB, despite earlier pronouncements during preparation of the AB 1852 report, argues that combined cycle power plants may pose substantial problems in meeting air quality standards due

to the necessity for substantial pollution trade-offs, and has proposed rules in favor of using natural gas when it is available.[5] Finally, the federal government has stated that "natural gas or petroleum shall not be used as a primary energy source for new electric power plants and no new electric power plant may be constructed without the capacity to use coal or any other alternate fuel as a primary energy source".[6] There are limited exceptions to this policy. These elements of state energy policy appear to be inconsistent and are at least confusing and uncoordinated.

The Commission's Biennial Report was to have focused policy alternatives for the Legislature and the Governor. The environmental impacts, the costs, and the feasibility of various alternatives were to be assessed.[7] To accomplish these objectives, coordination and knowledge of other agencies' permit process requirements is necessary. The first Biennial Report failed to provide this coordination. The reason for this failure was not an oversight or error on the part of the Commission. The Warren-Alquist Act places the Commission in the position of lead energy agency without the authority necessary to require coordination with other agencies. For example, there is no requirement for the ARB or the local air pollution control districts to coordinate their regulatory or planning activities with the Commission. While the Commission may not have vigorously attempted such coordination, it has no authority to demand such coordination. The second Biennial Report, due in the spring of 1979, may make improvements in analysis, but there is no guarantee of increased coordination.

The Commission's first Biennial Report could not have been expected to provide the kind of guidance necessary for policy articulation. The agency was new and still experiencing start-up problems. In addition, the Warren-Alquist Act dealt almost exclusively with electrical energy policy, and not overall energy policy. The Report should have provided, however, the focal point for conflict identification and resolution.

Thus, despite several legislative attempts to increase the state's ability to define energy policy and plan for future needs, California does not have a declarative and understandable energy policy. Elements of a policy exist, but they are confused, ill-planned, and unfocused.

Policy Articulation: The Planning Function

The Warren-Alquist Act did not provide for the state to specify energy development plans. Instead, it established a planning process which has three phases: the Biennial Report, the Notice of Intention (NOI), and the Application for Certification (AFC). At each stage the public interacts with the Commission and an applicant. Each stage progressively narrows the issues, from the broad generic issues in the Biennial Report, to the specific issues of plant design in the AFC.

The present energy planning framework requires the state's utilities to submit forecasts of future electricity demand and to indicate the resources which will be required to meet demand. The Commission examines these forecasts, reviews them independently, and adopts an official state forecast.

The forecast is contained in the Biennial Report for 5, 12, and 20 years. As part of the Report, the Commission must also determine which technologies are available for use in the state and the relative merits of each. This "bracketing" of technologies is then used as the criterion to judge alternatives proposals at the NOI stage.

Unfortunately, planning by state government has not led to more certainty that our energy needs will be met and has not provided guidance to utilities and other governmental entities on preferred energy sources. The process is now characterized by multiple, disjointed and uncoordinated planning activities which do not accurately reflect energy needs.

Despite the passage of Warren-Alquist, there is no central agency which coordinates energy policy and provides for its implementation. Pieces of energy policy are articulated by the Commission, the PUC, the ARB, and others, but there is little consistency among these agencies. Without the early involvement of these agencies and their analyses of the impacts, potential, and feasibility of various energy options, there can be little real planning for future energy resources.

For example, there has been little or no coordination between the preparation of the Commission's Biennial Report and the preparation of local and regional elements of the State Implementation Plan for air pollution control. The State Implementation Plan (SIP) is prepared by local and regional air pollution control

districts, under the guidance of the State Air Resources Board. The Plan, which is a requirement of federal law, is to contain all regulations and control programs which are required to achieve and maintain federal ambient air quality standards. Since air quality is the principal constraint governing the use of many types of energy sources, it would seem imperative that the Biennial Report and air quality planning be coordinated. Unfortunately, this has not been the case.

To illustrate, several draft local airt quality management plans assume future base load capacity from nuclear plants. For example, San Diego County's plan includes power from Sundesert; the Association of Bay Area Governments' (ABAG) plan includes power from other "proposed" nuclear plants.[8] These plans are inconsistent with the Legislature's nuclear policies. The EPA noted this inconsistency in its comments on the ABAG plan. Furthermore, several local air quality plans assume that a substantial proportion of existing fossil fuel-fired capacity will be retired. This assumption is inconsistent with the Commission's policy to encourage repowering of existing oil plants.

Moreover, the Commission stressed in its first Biennial Report the benefits of cogeneration and estimated a 2000 MW cogeneration potential in the state.[9] This estimate was made without considering whether local air quality plans take into account the emissions trade-offs necessary for future cogeneration projects. The South Coast Air Quality Management District's

plan, for example, does not include cogeneration projects.[10] This lack of coordination between the Commission and air pollution control districts is due partly to the Commission's belief that cogeneration projects should be exempt from trade-offs requirements. A review of state and federal air quality laws indicates, however, that such exemptions are not possible without statutory changes. Thus, the Biennial Report did not properly coordinate the state's energy and air quality policies with respect to cogeneration. Coordination between the Commission and the ARB on cogeneration did not begin until 1978 when the cogeneration potential from the oil fields in Kern County was threatened by a proposed ARB rule.[11]

While the ARB and local air pollution districts, and not the Commission, should be held responsible for the contents of the SIP, its importance to the viability of the Commission's Biennial Report cannot be underestimated. The recent agreement between the Commission and ARB will go a long way toward streamlining the approval process for <u>specific</u> energy projects. There remains a need, however, to integrate air quality and other constraints into the Commission's process of evaluating preferred energy sources. Thus, the agreement addresses the siting process, but not the planning process. Specific constraints to the development of energy sources should be carefully evaluated in a format such as state or regional supply plans, rather than the present project-by-project review.

The PUC and the SWRCB also engage in planning and regulatory activities according to their own policies. The PUC provides for the future capital investment and research and development activities of the private utilities through rate cases. The SWRCB has declared policy on the use of inland water for power plant use. Thus, each has a planning process which is disconnected from the Biennial Report but which has a profound effect upon energy development and use. Furthermore, within its own planning and regulatory process, an agency can disagree on energy policy and impacts. Witness the ARB statement on the feasibility of siting coal in Southern California and the local air pollution control district officer's statement to the contrary.[12]

Even in the areas where the planning process is more prescribed and is intended to be integrated by statute, there have been disputes and uncoordinated activity. The Coastal Commission is required by statute to take the Commission's comments on its designation process into consideration before it designates parts of the coast as unsuitable for power plant locations.[13] The Commission has participated in this designation process and on July 18, 1978, requested that the Coastal Commission not proceed with its proposed designation until the Commission and the Coastal Commission could jointly determine if the remaining areas of the coast could accommodate new power plants. The Commission argued that although the Coastal Commission left 27% of the coast undesignated, a closer inspection revealed that of the 27%, 11% was in federal hands and 13% was located in areas known to be unsuitable for power plant sites, leaving 3% of the coast available for power plant development.

The Commission stated that of this 3%, it was not known whether a power plant or any other major facility could be constructed.[14] The Coastal Commission passed the proposed designation over these objections, and provided only 15 minutes for Commission comment.

Another notable example of this lack of coordination and planning occurred in the Sundesert case before the Commission. The NOI had been approved by the Commission and the issue of an exemption from the nuclear waste law was being debated by the Legislature. The issue of San Diego Gas and Electric's ability to finance the project was raised in the NOI and the issue was to be a major point for resolution in the AFC. Subsequently, the PUC indicated that San Diego Gas and Electric could not finance their proposed share of the project. Both the declaration by the PUC and the decision to deal with financing in the AFC could have increased delays and the cost of arriving at a decision.

Uncertainty also results from the planning procedures of the Commission itself. The Commission is mandated to certify sufficient facilities to meet forecasted demand. Demand forecasting by the state was to narrow debates regarding how much electrical energy would be needed and to provide a basis for determining "legitimate" need. Once a demand forecast is adopted, utilities could then plan to meet the demand with resources of their own choosing and submit applications to the Commission for approval. This process should supply an element of certainty that future needs will be met.

There is, however, some doubt as to how well this process has functioned. In its testimony before the Advisory Committee, the Commission indicated that future needs would indeed be met. The Commission indicated that its adopted forecast showed a need for 23,800 MW of new generation by 1990, of which 23,777 MW were under construction, under review by the Commission, or in the planning stages.[15] The initial list of projects included 2400 MW of power from the Stanislaus Nuclear Power Project--a project which is doubtful under current state policy; it included 1500 MW of power from a Southern California Edison coal plant and 1000 MW from a Department of Water Resources project which are probably mutually exclusive, and several thousand megawatts of combined cycle oil plants which are restricted by federal policy and may have air quality difficulties. In a subsequent submittal to the Advisory Committee,[16] the Commission altered some of the above resources (e.g., deleting Stanislaus).

Even if all of the above resources were to prove feasible, the Commission would have to certify <u>every plant</u> in the resources plan in order to meet its mandate under Warren-Alquist. It would also have to satisfy the requirements of CEQA that alternatives to the projects are examined. It is doubtful whether substantial consideration could be given to alternatives under these conditions, given the lead times and planning necessary for large base load facilities.

The Commission indicated recently that electricity growth was not expected to be as high as it has been in the past. The Commission indicated that growth in electricity sales is expected to be lower than the 4.2% projected by utilities and more near the 1.9% which it has averaged over the past six years. (This is electricity sales in kilowatt hours which refers to electricity sold over time; it is distinguished from peak demand which is the amount of electricity required on a system at any given time. Utilities must have enough capacity to meet peak demand.) The Commission also indicated that if growth does slow down as the past trend indicates, then utilities could defer 2000 MW of capacity in 1985 and 6000 MW in 1990. The above figures are based on a 2.7% growth rate in electric generating capacity which the Commission, derived by taking the simple average of figures represent average growth in electricity sales (1.9%) and in annual peak demand (3.5%) over the past several years. It is unlikely that the forthcoming electrical forecast in the Biennial Report will be at this level or will be derived in the same manner. These interim forecast assessments add to the confusion and uncertainty in the planning process.

The final issue in this area is the nature of the Commission "mandate" to meet future demand. The Commission has stated that "This mandate distinguishes the Commission from most other passive licensing agencies and commits the state to playing an active role in assuring that electrical energy needs are met".[17] This is indeed a distinguishing feature of the Warren-Alquist Act, but

there are questions about its operation and viability. The mandate is met, presumably, "by developing alternative ways of meeting electrical energy needs and deciding which alternatives are realistic and reasonable and....implementing the choices".[18] These alternatives are tested against applications in the NOI process. The difficulty with this procedure is that it occurs in the latter stages of the regulatory process. If an alternative is found, will there be time, political will, and an applicant to pursue the alternative? If an applicant does not wish to pursue the alternative, what will happen? In the AB 1852 alternative resource plan this situation arose: The Commission indicated that repowering of Silvergate units 3 and 4 was a partial alternative to Sundesert. San Diego Gas and Electric indicated the repowering was not feasible and did not pursue the option and choosing instead to seek power from out-of-state sources.

There are no incentives or procedures to operationalize the Commission's "mandate" to site needed facilities. In terms of planning, even if such incentives or procedures existed, they would be exercised too late to be effective. The results are either failure to meet future demand or the loss of real alternatives because of time and economic constraints.

To summarize, the energy planning process is fractured in California. It is characterized by little coordination between agencies and little integration during the various planning stages. Each agency has its own process and policies which it follows, and each is disconnected formally from the Biennial

Report process. The results have been increased costs to the ratepayer, unclear planning procedures for utilities in the state, and increased uncertainty in planning for future energy needs.

Political Accountability

Energy development and consumption are important considerations in all social, economic, and environmental issues. The public, therefore, has a vital interest in energy decisions. State government must provide a clear decision-making structure which allows the public to demonstrate, through the political process, its degree of satisfaction with the decisions being made. Thus, government officials and agencies must remain in a position of political accountability.

The current energy decision-making structure in state government does not provide for political accountability. Responsibility for energy decision is not clearly assigned. Neither policy development nor planning functions are assigned to one individual or agency.

For example, in a recent letter to the U.S. Department of Energy (DOE), the Chairman of the Commission strongly urged the federal government to classify California's heavy crude oil as an alternate energy source under the National Energy Act.[19] Although this policy could affect the course of California's energy development plans, it is difficult to determine who was making this policy. The issue was not brought before the full Commission for approval or discussion. Is it the Chairman's policy? The Governor's? The Commission's?

The Sundesert project provides another example. The Commission approved Sundesert in the NOI stage. The Legislature subsequently denied Sundesert a statutory exemption from the nuclear waste laws, largely as a result of the Commission's recommendation. The PUC determined that San Diego Gas and Electric could not finance the entire project. Who, or what agency, was responsible for halting the Sundesert project?

Solar energy development is another area where responsibility is assigned to several different agencies. The Commission has the largest share of state resources for solar energy programs, particularly those relating to the solar tax credit. The SolarCal office and the SolarCal Council take some responsibility for promoting solar energy in new homes, but so does the Commission. A third actor is the Office of Appropriate Technology (OAT) which promotes passive energy designs and structures that use renewable resources. A fourth is the Department of Housing and Community Development with its solar loan program.

This situation exists in other areas. The PUC makes its decision on a certificate of public convenience and necessity for new facilities as much as nine months after the Commission has issued its certificate for construction of the facility. The Commission is responsible for conservation programs, but the PUC and OAT also have conservation responsibilities. Electrical forecasting is the responsibility of the Commission and gas forecasting the responsibility of the PUC.

In the energy field, those state agencies with the most responsibility (i.e., the Energy Commission and the PUC) have the least political accountability. Both are bodies with members sitting for fixed terms. Commissions are noted for their lack of accountability. In 1971, the President's Advisory Council on Executive Organizations (Ash Council) concluded:

> Independent regulatory agencies headed by collegial bodies do not, and probably cannot, provide for the political accountability required to insure public responsibility.
>
> A serious flaw of the collegial structure is an inability to fix responsibility due to the inherent diffusion of authority among relatively anonymous co-equal members. In addition, appointment for fixed terms gives Commissioners a degree of independence that may serve to protect them from improper influence, but was not intended to allow them to become unresponsive.[20]

Independence among co-equal members and insulation from political influence may be highly desirable in regulatory bodies whose responsibilities are adjudicatory. When such bodies are delegated program responsibilities, it becomes genuinely difficult to determine who is actually running the program.

Internal Organization of the Commission

The Warren-Alquist Act empowers the Chairman of the Commission to direct the staff in accordance with the policies of the Commission. This provision makes the role of the Executive Director unclear and has reduced the Director's authority. The Chairman's vaguely defined responsibility for staff activities may have

encouraged other Commissioners to involve themselves in administrative matters. In any event, individual Commissioners frequently interact with staff on specific matters--e.g., preparation of the electricity forecast, promotion of solar energy, etc. This involvement reduces staff independence, blurs the distinction between the adjudicatory role of Commissioners and the administrative role of the staff, and provides for a poor allocation of staff resources.

In most organizations, the chief administrative officer is responsible for the operation of day-to-day affairs. This person ensures that key projects are progressing, reviews staff products, and sets program goals and procedures. In the Energy Commission structure, the Chairman, and at times the members of the Commission play this role. The result is that the role of the Executive Director is not well defined. Does he work directly for the Chairman? Is he the person responsible for staff activities? Is the staff answerable to the Director, to the Chairman, or to a committee of the Commission?

Even the Chairman's role in this area is not clear, for while the statute may call for the Chairman to direct the staff, all the Commissioners at times become involved with staff products and resources. The insights of the Ash Council may be instructive in this situation. It noted that "multiheaded management may also result in a misallocation of agency resources in the absence of agreement on well-defined priorities. While a Commission chairman may have theoretical authority to direct staff activities, as a

practical matter the staff will be inclined to respond to all Commissioners. Thus, allocation of staff resources becomes difficult to control."[21] Another aspect of Commissions which results in staff responding to all Commissioners is the need to obtain a majority vote.

Misallocation of resources can easily occur when management is performed by a Commissioner. The interests of individual Commissioners differ and, as a result, program areas of individual interest are emphasized when there may be areas with more attractive opportunities for results. This occurs at the Commission when the program preferences of various Commissioners are introduced into staff budgets without a systematic set of priorities. The Auditor General recently noted that the Commission has spent millions of dollars for its research program without setting priorities and has focused its resources in areas with relatively low energy potential.[22] In summary, this situation is a good example of resource allocation based on the interests of various Commissioners rather than on a system of carefully defined priorities.

The statutory direction of staff by the Chairman also reduces staff independence. It may sometimes be difficult to tell where staff products end and Commissioner decisions begin. The Biennial Report, for example, is the central regulatory document for the state. More than one Commissioner is helping to draft this document and is reviewing and approving outlines and forecast results. Commissioners, after participating in the drafting of the Report

are then to sit in judgment on it and hear arguments for its revision; a task they cannot expect to conduct with the requisite dispassion. The staff, on the other hand, is expected to present an independent view and defend its product--a task they cannot perform with the necessary freedom or vigor if they have not had a completely free hand in preparing the initial Report. These overlaps in the functions of staff and Commissioners result from a structural flaw which combines regulatory and administrative functions.

Alternatives Development Program

One of the more novel features of the Warren-Alquist Act is its mandates for the development of alternative energy sources that are of unique benefit to the State. The Act encourages research and promotional activities to accelerate the development of these alternatives. There is, however, doubt whether in the four years since its creation the Commission has carried out these mandates. Several studies have noted the Commission's lack of precision in defining development goals and objectives and its failure to establish research priorities. Inadequate and undefined objectives have reduced the state's contribution to development programs and have limited the use of alternatives in resource planning.

In the last two budget years, the Legislative Analyst has criticized the Commission's research and development program. In his fiscal 1978-79 analysis of the budget, the Analyst stated

that the Commission's research budget contained:

> "....insufficient detail with respect to the purpose, expected products and timeliness of proposed research projects. Of major importance is that the report lacks precision in stating what the Commission would do with the results of the proposed study or research. In many cases, our discussions with the Commission's staff indicate that plans are, in fact, incomplete or vague and that the problem lies deeper than the semantic differences in the report."[23]

This same lack of precision was noted by the Auditor General in his recent report on the Commission's research program. The report states that "the current planning process is insufficient to ensure maximum benefits from future resources spent on research of energy alternatives".[24] The report recommends a number of changes to insure that research projects are ranked in order of priority, that quantifiable objectives and milestones are established, that literature search is conducted before research is begun, that research projects receive peer review, and that a formal monitoring system is established.

Without clear directions and sound management practices, the state's alternatives program cannot contribute significantly to the acceleration of alternative resources development. Policy has not been established clearly in this area and continues to suffer from a lack of well-defined objectives. This vague direction and lack of planning indicates that the state's efforts in alternative energy development are inadequate.

Public Participation

Public participation in energy decisions is reduced because there is no articulated and understandable energy policy. Public

participation is affected by an inconsistent commitment the state has made to providing the public with the means to participate. Each of the several agencies responsible for energy planning and programs has different procedures for public input.

The Commission recently revised its procedures in the siting cases to provide for more informal hearings. It has also increased the role of the Public Advisor and the Commission's ability to attract the public's interest. These activities are not replicated by other agencies, such as the ARB and PUC. These agencies play a more traditional role by providing the public with time to comment on proposed decisions, but have no institutional program for the public's involvement in the decision process, even though their decisions are essential ingredients in energy use and development.

Providing consistent procedures for public participation would assure that energy decisions are made with substantial involvement as well as comment by the public. Energy agencies need to address this issue.

Combining Regulatory and Administrative Processes

The Warren-Alquist Act gives the Commission responsibility for the four major energy functions: planning and forecasting, power plant siting, conservation and alternatives development. In theory, placing these responsibilities in one agency provides for a comprehensive and systematic analysis of energy problems and options. The combination insures that the interrelationships among each of these functions are not lost by separating their

administration. The effectiveness of each function is increased because these interrelationships are recognized by common administration.

The Warren-Alquist Act also combines two processes. The Commission has both regulatory and administrative responsibilities. The regulatory process requires an open forum for debate and for weighing evidence from all interested parties. A commissioner in this role is required to be a dispassionate trier of fact; he or she should be as free as possible from prejudice. The administrative process, on the other hand, requires program development and operation, policy analysis, and advocacy. An administrator in this role must exercise policy leadership by proposing solutions to general problems and advocating policy preferences. Thus, each of the two processes has distinct features. The regulatory process operates primarily on a case-by-case basis and renders final decisions; the administrative process proposes alternatives and promotes their adoption.

The Warren-Alquist Act has placed the same individual in the impossible dual role of judge and advocate. The integrity and credibility of the regulatory process is reduced by the perception that it is compromised for administrative goals. The regulatory process becomes viewed as a vehicle for the effectuation of administrative policy to the extent that the judge in the regulatory process is also an advocate of policies which can influence that process.

Many of the functions performed by the Commission are implemented through both the regulatory and administrative process. The Commission's conservation program, for example, requires the adoption of building and appliance standards and the promotion of conservation through education and outreach programs. Power plant siting requires the certification of proposed sites and facilities and also the early site screening and ranking to plan for future development. The development of alternative technologies may require demonstration projects and also the licensing of these same projects in the siting process. The Commission's structure gives commissioners final authority for both regulatory and administrative processes.

For example, on February 1, 1979, the SWRCB held a workshop on the proposal of the Department of Water Resources (DWR) to construct a coal facility to produce electricity for the State Water Project. At this workshop, the Chairman of the Energy Commission urged DWR to use coal-fired power plants and indicated that coal is environmentally safe. This advocacy would be important for any effort to develop a program for use of particular resources, but the fact that this same individual will also be asked to sit in judgment of this particular project compromises his adjudicatory role. The Chairman's advocacy for a particular fuel, proper in an administration process, is imprudent when combined with a regulatory process that requires impartial judgment.

Another example is the recent memorandum sent to members of the Advisory Committee. This memorandum was to update the forecast and give an initial indication of available or planned

resources to meet needs. The memorandum indicated that electrical demand showed a decrease over the past several years and the trend was expected to continue. This lower demand figure would allow the state's utilities to defer 2000 MW of planned construction by 1985 and 6000 MW by 1990. This memorandum was signed by a commissioner who will soon be asked to make an independent judgment to adopt a forecast and hear all issues openly and objectively. This is a difficult situation when an initial judgment has been made.

This combination of the regulatory and administrative processes also reduces the resources devoted to promotional programs. There is a tendency in any system that contains elements of the regulatory and administrative processes for the regulatory process to dominate the system. The regulatory process is one in which the immediate needs for information and staff resources are dramatic. The regulatory process generates most of the controversy and attention from the public and the political bodies of the state. If the theory of the "pinching shoe" or "squeaky wheel" have any validity, they will operate here.

Evidence of this drift in resources toward regulatory activity is already apparent. Currently, over 60 percent of the Commission budget is devoted to regulatory activity. The trend in the last two budget years has been to reduce the promotional activities in far greater proportions than other areas. The Governor's 1978-79 proposed budget had 241 person-years devoted to

conservation and alternatives development. The 1979-80 proposed budget has 152 person-years devoted to these same areas. While all programs in the Commission were reduced in recent years, the siting and assessments programs were reduced less (12%) than conservation (50%) or alternatives development (19%) from the 1978-79 proposed budget. In addition, the reductions within the conservation program, itself, were made by reducing promotional activity and maintaining regulatory programs.

Another useful indication of where institutional energy is applied is the time spent by decision-makers on each of these areas. An examination of the Commission calendar for January 29, 1979, through March 28, 1979, shows over 75% of the hearing days are devoted to siting cases or regulations, and the remaining 25% devoted to business meetings or the Biennial Report.

Commissions are compelled both by public pressure and the law to concentrate on the regulatory process. Committees of commissions, formed for regulatory purposes, tend to absorb resources without a clear view of how their activities affect the total quality of the Commission, because the press of cases is directly related to their reputation and role as judges. The Warren-Alquist Act has "built in" these conflicts; they are real and they are damaging, but they are avoidable.

FOOTNOTES

[1]California Public Resources Code, Sections 25524.1, 25524.2, 25524.3.

[2]Ibid., Section 25540.6.

[3]AB 471 (Calvo), 1977.

[4]California Public Utilities Commission, Decision No. 89177, pp. 85-86, July 31, 1978.

[5]Letter from Thomas C. Austin, Deputy Executive Officer, California Air Resources Board, to James Walker, Executive Director, California Energy Resources Conservation and Development Commission, September 6, 1978; California, Air Resources Board, notice of public hearing to consider a model rule to prohibit burning of liquid and solid fuels if natural gas is available, March 29, 1978.

[6]U.S., Congress, Powerplant (sic) and Industrial Fuel Users Act, Conference Report to accompany HR 5146, 95th Congress, Second Session, 1978, p. 11.

[7]California Public Resources Code, Section 25309.

[8]Association of Bay Area Governments, San Francisco Bay Area Environmental Management Plan, Chapter VI, Section D, June 1978.

[9]California, Energy Resources Conservation and Development Commission, California Energy Trends and Choices, 7 vols., Vol. 1, p. 108.

[10]Southern California Association of Governments and South Coast Air Quality Management District, Draft Air Quality Management Plan, Chapter VII, (Forecasts), August 1978.

[11]California, Air Resources Board, Proposed Model Rule for Control of Emissions of Sulfur Oxides and Oxides of Nitrogen from Steam Generators in the San Joaquin Valley Air Basin, March 24, 1978.

[12]Testimony of Tom Austin, Deputy Executive Officer of the Air Resources Board and J.A. Stuart, Executive Officer of the Southern California Air Pollution Control District on SB 1015, before the Assembly Resources, Land Use, and Energy Committee.

[13]California Public Resources Code, Section 30413.

[14]Testimony of California Energy Resources Conservation and Development Commission before the California Coastal Commission, San Diego, July 18, 1978.

[15]Testimony of Emilio E. Varanini, III, Commissioner, California Energy Resources Conservation and Development Commission, before the Advisory Committee to the Joint Committee on Energy Policy and Implementation, November 1, 1978.

[16]Letter from Emilio E. Varanini, III, Commissioner, California Energy Resources Conservation and Development Commission, to members of the Joint Committee on Energy Policy and Implementation Advisory Council (sic), December 13, 1978.

[17]Testimony of Emilio E. Varanini, III, Commissioner, California Energy Resources Conservation and Development Commission, before the Advisory Committee to the Joint Committee on Energy Policy and Implementation, November 1, 1978, p. 2.

[18]Ibid.

[19]Letter from Richard Maullin, Chairman, California Energy Resources Conservation and Development Commission, to David Bardin, Administrator, Economic Regulatory Administration, U.S. Department of Energy, November 7, 1978.

[20]U.S., The President's Advisory Council on Executive Organization, Roy L. Ash, Chairman, Report on Selected Independent Regulatory Agencies (Washington, D.C.: Government Printing Office, January 1971), p. 40.

[21]Ibid., p. 39.

[22]California, Joint Legislative Audit Committee, Improvements Needed in Planning and Monitoring Research and Development of Alternative Energy Resources, November 28, 1978.

[23]California, Legislative Analyst, Supplemental Analysis, Item 173, Energy Resources Conservation and Development Commission, Research and Development Contracts, p. 1.

[24]California, Joint Legislative Audit Committee, Improvements Needed, p. 1.

OPTIONS FOR REORGANIZATION

ACR 177 requires the examination of three basic options for reorganizing energy functions. These options are: (1) reorganizing the Energy Commission; (2) replacing the Energy Commission with a new or alternate agency; and (3) reallocating functions among the various agencies with energy responsibilities. There are other variations of these three alternatives, but this section discusses only the three options in ACR 177. Each of the three options will be presented with an explanation and the essential arguments for or against its adoption.

REORGANIZING THE ENERGY COMMISSION

This option would retain the Energy Commission with most or all of its present authority and would make changes to the Commission's processes and functions. External change, such as the creation of a Resource Council, and internal changes, such as the election of the Chairman of the Commission by his peers, and separating the responsibilities of the staff and the Commissioners, are some of the reorganizational options. In addition, changes to the Commission's processes and programs, such as a common timetable for all agencies' reviews in siting proposals, are included in this option, as well as resource planning.

Resource Council

A Resource Council could be created either by executive order or by statute. The Council would be composed of the heads of the various departments or agencies in state government which are responsible for resource management or regulation. The

Council would be chaired by the Governor, or his designee, and would be responsible for coordinating the activities of the various departments to ensure that resource policies do not conflict with resource programs. The Council would provide political accountability for resource and energy decisions by making the Governor responsible for coordinating major resources programs. Regulatory coordination could be ensured by requiring the relevant agencies to provide input to regulatory processes in a timely manner. For example, the ARB would be required to comment on a time certain basis on an NOI which is before the Energy Commission. The ARB would also be required to comment on the feasibility of proposals in the Biennial Report. Conflicts between agencies would be resolved by the Governor.

Pro - The argument for a Resource Council points to the ever-increasing complexity of resource-related decisions. These decisions must be coordinated in a way that allows responsibility to be fixed and accountability to be clearly assigned.

Society's conflicting views on resource priorities will complicate decisions affecting resources. For example, the need for cleaner air may run counter to the desire for more energy development. The Resource Council would provide the coordination necessary to arrive at clear decisions in the regulatory process while maintaining the integrity of each of the agencies involved. As one proponent of this view has stated, "These functions should neither substitute nor replace existing decision-making authority now vested in the Governor, Legislative and executive branch agencies."[1]

Con - The Governor currently has the authority to establish the proposed Resource Council. Many of the Council's functions, however, should be performed by the Resources Agency itself. Adding a Council on top of the existing departments, boards, and commissions is likely only to add to the present confusion and uncertainty.

One of the problems at which a Resources Council is directed is the unilateral action of departments and commissions. To leave these agencies with their respective authority does not solve the problem of interagency cooperation. This is particularly true of independent commissions not subject to executive control. The Council would have no authority to require actions, and the Governor would have limited control over many decisions. It is far better to require coordination by statute using policy as a regulatory instrument than to rely on meetings of a large Council to resolve issues. The Resource Council would simply add another level of uncertainty to the present process without any assurance of affecting energy decisions.

Separation of Staff Functions

The Warren-Alquist Act mandates the Chairman to direct the staff, subject to the policies of the Commission. One internal change is for the Executive Director to be solely responsible for the administration of the staff. Variations on this option would have both legal counsel and line staff reporting to the Director. This change would allegedly provide some separation between the functions of the Commission and the staff. The Director, under this proposal, would serve at the pleasure of the Commission.

Pro - Many have suggested the need for the staff to have a greater degree of independence than it now has. Statutes requiring the Director to be responsible for the staff's activities will align the respective responsibilities of the Commissioners and staff more appropriately. This change was recently made in the PUC's organization and has had beneficial effects in increasing staff accountability.

Con - Merely proclaiming the Director to be responsible for the staff, however, may not overcome four years of precedent at the Energy Commission. The Commission regularly experiences involvement by Commissioners in staff activities, and this will not be eliminated by simply saying it should no longer occur. Arguably, as long as the Commissioners can remove the Director, there will not be any sense of staff independence. Commissioners will continue to be involved in staff activities.

The direction of the staff by the Chairman is necessary to provide more political accountability and allow for the Governor to have influence over what otherwise would be an entrenched bureaucracy. Direction of the staff by the Chairman insures that policy changes can be effected in a commission form of organization.

Elected Chairman

A related proposal is for the Commission to elect its Chairperson for a specified term from among the members; the Governor currently appoints the Chairman.

Pro - Changing the present method of selecting the Chairman

introduces an element of consensus into the Commission's proceedings. Currently, the Chairman does not require the support of his peers in order to retain the position. Were he required to build support among his colleagues, it would promote collegiality and more agreement on policy. It could also provide the appropriate basis for leadership of a collegial body.

Con - The Governor's appointment of a Chairman allows the Governor to have some influence over the operations of commissions. The Governor would not otherwise have this influence since commissioners' terms are fixed, and staggered. The appointed Chairman can bring the Governor's policies into what might otherwise be an organization unresponsive to new policy direction. Proponents of this view point to the recent study of the PUC performed for the State Senate, which recommended that the Governor select the Chairman of the PUC.[2]

Common Timetable

One of the continuing problems noted earlier is the multiplicity of agencies exercising permit and planning authority over some aspect of energy development. These agencies have not coordinated their activities in either the regulatory process or the planning process. One method of providing coordination is to require, by statute, each of the agencies, such as the ARB, the PUC, the SWRCB and others, to become involved early in the process. A common timetable for review would require their input into both the regulatory process and the planning process on a time-certain basis. The ARB, for example, could be required to make a

determination on air quality during the NOI; the PUC could be required to make a financial determination during the NOI. These agencies' views and their determinations of feasibility would also be required in the Biennial Report. Thus, the Biennial Report would indicate the likelihood that a particular project could meet state and federal standards, and whether sufficient mitigation measures were available.

This common timetable would require placing the present ARB-Energy Commission agreement into statute and would extend its operation to the planning process. Also, changes would need to be made in the current statutes which require the PUC to issue its certificate subsequent to the Energy Commission's decision on the AFC.[3]

Pro - The above changes are intended to bring all energy-related agencies into a common framework where decisions can be made in a specified time. Many of the resource agencies administer permit programs which affect energy development projects. Unless an initial determination on these issues is made early in the process, substantial time and money can be expended with no results. Occurrence such as that in the Sundesert case, where one agency approves a site and another subsequently makes constructiion impossible, should be avoided.

Con - On the other hand, requiring agencies to finalize initial judgments may not increase cooperation. Placing decision requirements into statute may produce inflexibility and eventually create more mercurial decisions as agencies discover information

which alters their initial judgments. The agreement between the ARB and the Commission indicates that agencies may be able to resolve many problems on their own.

Resource Planning

Resource planning refers to the process of preparing to meet future electricity needs with appropriate resources. This requires that fuel type, capacity, plant type, and perhaps general location of new facilities be defined early enough to plan, obtain permits, and construct new facilities. Currently, utilities perform this function; the state has little or no role. The PUC, however, in a recent PG&E rate case, required PG&E to produce a resource plan which will emphasize cogeneration and other alternatives.[4] The Energy Commission's role in resource planning is limited to defining commercially available technologies and analyzing alternatives to utility proposals.

There are several possible roles which the state might assume. The state could continue to play little or no role and leave resource planning to the utilities. Another option would be for state government to provide direction to the utilities by formally commenting on their supply proposals. Such proposals are currently submitted both to the Commission as part of its forecast procedures and to the PUC for rate purposes. There is currently no formal mechanism for the state to approve these plans. This procedure would increase minimally the state's current role in resource planning.

The state could also approve resource plans for utilities. Under this approach, utilities would submit their proposed plans

to a state agency 10 or 15 years in advance of construction. The agency would review the plans and discuss them with the utility and the public to arrive at an approved resource plan which would be binding on the utility and the state. These plans would be reviewed and approved every two years.

Finally, the state could assume the role of resource planner and replicate utility activities in the resource planning area. Here, the state would assume the responsibility to plan for meeting future electrical demand by prescribing the amount and kind of resources to be used in the future. Such a state-imposed plan would be binding upon the utilities.

Pro - Utilities are regulated to insure that their operations are performed in the public interest. Utilities are required to meet the service requirements of their customers, but have always maintained that the manner in which they render service should be left to their discretion. During the last decade, however, approval of facilities has been difficult because the public's view of preferred resources did not mesh with the utilities' view. The only way the state can take an active role in electrical policy is to influence the choice of resources in a fashion which achieves previously established state policy objectives. This implies that the state government should be involved early in the planning process to indicate preferred alternatives.

For example, the state's efforts to develop alternative energy resources cannot have a substantial impact unless the state

has the capability to guide the utilities' investment into areas proposed by the state. Cogeneration, in spite of its potential, has made little contribution to our electrical resources. Utilities have thus far made only limited efforts to exploit this potential.

Although the present regulatory system makes decisions about the type and quantity of the resources to be used, these decisions occur at the wrong part of the planning process. Currently, the state develops the criteria to determine which technologies are commercially available and includes these criteria in the Biennial Report. Alternatives to a utility proposal are then compared and evaluated in the NOI process, where the final requirements of CEQA, relating to consideration of alternatives, are met. The problem is that this test of alternatives comes far too late in the process to be meaningful. Thus, the state's influence over resource selection occurs when large amounts of time and money have been expended on a project. This decision should be made earlier in the process when there is time to respond to changes in circumstance or policy. Having the state approve or sign off on a resource plan would provide a better framework for energy planning.

Con - Most utilities would object to increasing the state's role in resource planning because planning for future needs has always been the utilities' responsibility. Utilities have the staff, the expertise, and the incentive to plan for future needs. Furthermore, the utilities, not the states, bear the responsibility

for meeting the public's need for electricity. The public holds utilities responsible for inadequate and unreliable service.

State government cannot maintain the staff necessary to perform these functions. Resource planning requires individuals with strong technical backgrounds which may require compensation beyond the state's capability. The large number of persons necessary for resource planning will also pose a problem since planning activities require expertise in a number of different disciplines.

Forecasting Issues

The Commission has the responsibility for electricity demand forecasting, but the PUC retains its responsibility for forecasting natural gas demand. In forecasting electricity, the Commission cannot ignore demand for natural gas since for many areas natural gas is in direct competition with electricity; an increase in natural gas demand may cause a corresponding decrease in electricity use. The PUC's responsibility is to make short-term forecasts for rate-setting purposes. Short-term forecast methods may not be appropriate for longer term planning.

One option for altering the present structure is to place the responsibility for both gas and electricity in one agency. This structure will assure consistency in energy forecasting.

Pro - Centralizing the entire forecasting function may provide for a more systematic and complete forecasting capability and may save money by avoiding duplication of effort.

Centralizing this function may increase the accountability for forecast results and provide for greater coordination of interrelated forecasting functions.

Con - The PUC and the Energy Commission use different forecasting methods. Furthermore, the forecasts are put to different uses. There is no apparent reason for placing all forecasting responsibility on one agency, since short- and long-term forecasting requirements are different.

Conservation Issues

Both the Commission and the PUC have responsibility for conservation programs. The Commission administers both standard-setting and promotional programs. The PUC is responsible for reviewing and approving utility conservation programs and expenditures. The Commission presents testimony before the PUC on utility conservation programs and has a larger resource base, both in staff and contact funds, upon which to draw. The possibility of centralizing the conservation activities of the state in one agency may create a more consistent conservation program. The question is: Should the Commission or the PUC have this authority?

PUC: The conservation program conducted by the two agencies has resulted in some friction over funding sources and criteria for measuring utility efforts. Combining the responsibility in one location may increase both efficiency and effectiveness. Load management standards, for example, are established by the Energy Commission but the rate portions of the standards and utilities'

costs for their programs must be met by the PUC. Consolidating all programs dealing with utilities could produce more effective results if they were the responsibility of the rate-setting agency.

Commission: The Energy Commission has a larger pool of talent and experience upon which to draw in such matters as building design, appliance operations, residential and business outreach programs, etc. Conservation programs could be more comprehensive and reach a wider audience if total program responsibility were given to the Commission. The Commission should be authorized to intervene in PUC cases, as well as municipal utilities' proceedings.

REPLACING THE COMMISSION WITH AN ALTERNATE AGENCY

There are three basic variations on the option of replacing the Energy Commission with another agency. First, there is the alternative of creating a Department of Energy to perform all the functions now performed by the Energy Commission. Second, the functions can be split, some going to existing agencies and some to a newly-created agency. Third, all the functions of the Energy Commission can be transferred to an existing agency. Although each of these alternatives has its own variations, only the three basic alternatives will be discussed.

Department of Energy

This alternative calls for the creation of a Department of Energy, headed by a pleasure appointee of the Governor, to perform all the functions now performed by the Energy Commission. The

Department, therefore, would be responsible for both regulations and administrative processes associated with power plant siting, forecasting, conservation, and alternatives development. The electricity surcharge would continue to fund the operations of the Department, and most of the present Energy Commission staff would continue in their positions.

Pro - The major purpose of moving to a department structure rather than a commission is to improve efficiency, accountability, and coordination. A commission form of administration tends to be slow to act, divides authority, lacks accountability, and is a poor structure for managing ongoing programs. The department form of administration is seen as solving these problems.

Departments are more efficient because there is one decision-maker, not several. The need for hearings or numerous briefings on various issues is reduced or eliminated. Budgets can receive more expeditious approval; contracts can be executed more quickly, and staff will receive clear direction. Business can be conducted in an administrative fashion rather than a courtroom setting. Debate is limited and decision points clearly fixed.

Having a pleasure appointee serve as the individual responsible for energy decisions provides a degree of accountability not found in plural bodies. Policy directives and decisions can be appealed directly to the chief executive and public accountability assured through the Governor's power of removal. Since energy is a substantial societal decision, decision-makers should be publicly accountable. A department structure cannot only respond quickly to

changes in circumstances, but can be held responsible if it does not respond. Such swiftness of action is needed, especially in an area where federal activity is increasing.

Departments can provide for increased coordination and better management of staff resources. Since a department would be led by one person, it could formulate policy and interagency agreements without the necessary delay and debate encountered in a plural body and without the potential for substantial dissent. Because of clear leadership and the absence of a need to develop a consensus, staff resources could be more appropriately used and priorities established along programmatic lines. There would be no need to satisfy the various members of a plural body with their "pet" projects.

Management in a department setting can operate in a more traditional mode through a well-defined chain of command with clear lines of authority. There would be no dispersion of authority nor extensive deliberations over management tasks.

Con - A department structure also has weaknesses. There are some issues which, because of their complexity and controversial nature, require debate and deliberation, and where the cultivation, and even the necessity, of differing views is vital to sound policy. Power plant siting, for example, is a societal decision which must weigh questions of equity and requires the exercise of judgment on issues on which there is less-than-perfect knowledge. As another example, forecasting future energy demand involves

numerous judgmental decisions. In these areas debate is needed and dissent should be invited, both of which are limited in a department structure.

While a department structure may be expeditious in decision-making, it cannot provide the forum for debating essential issues and cannot insulate the decision-maker from political pressures. Energy decisions have consequences extending beyond the term of any particular administration. Indeed, given the long lead times on many development projects, the decisions of one Governor may have very little immediate consequence during his or her administration. Such decisions should be made by a dispassionate body, insulated from the political pressures of the day. This body can debate the merits of various proposals and be as free as possible from undue pressure.

Energy issues require some degree of consensus if they are to have any hope of proving viable. Consensus can only be built where there is a forum for debate and a free exchange of ideas. Consensus is not developed by the promulgation of rules and regulations by a department. Consensus must be constructed by a plural body which reflects many of the views that exist in society. The representation and debate of these views provide the necessary elements for decisions which must last for decades.

Functional Split Between a Department and Commission

This alternative calls for the creation of a department to perform some functions now performed by the Commission and the

transfer of other functions to a plural body. The most familiar such proposal is to create a department of energy to perform conservation and alternatives development functions and to transfer the siting and forecasting functions to the PUC. In essence, this alternative requires the division of present Commission functions between a line agency and a commission.

Pro: The advantages and disadvantages of department and commission forms of administration were discussed in the previous section. The proposal to split the various functions and place them in the appropriate type of agency has several advantages. Separating the line-oriented program functions from those of a regulatory nature prevents the appearance of, and opportunity for, bias or conflict among functions, preserves the integrity of the regulatory process, and allows the program functions to be administered in a more traditional organization. This can achieve the best of both worlds by placing functions in the type of agency best suited for their accomplishment.

For example, creating a department for the performance of program functions enables the Governor to develop energy programs according to his policy and provides a vehicle for their administration. A commission cannot serve this function because of its independent status. The chief executive needs to act upon his or her policies and should be given the tools to do so. The department, therefore, provides both accountability and flexibility in the administration of energy programs.

Furthermore, a split along functional lines would allow the

regulatory responsibilities now performed by the Commission to continue with a plural body. Such functions as power plant siting and forecasting are properly those of a plural body. These functions require a forum for debate and public discussion and a representation of different views.

Transferring the Commission's adjudicatory functions to the PUC has advantages. The PUC has the capability to administer and adjudicate these issues since it has experience in the field and a history of performing quasi-judicial functions. Responsibility for long-term forecasting would be combined in one agency. This responsibility is currently divided between the Commission, which prepares electric forecasts, and the PUC, which prepares gas forecasts.

Litigation and delays could be limited by the transfer of the power plant siting responsibility to the PUC. The PUC's decisions are reviewable directly by the Supreme Court. This eliminates the time-consuming and costly litigation that might otherwise occur at the trial and appellate court level and would provide a savings to the state and the rate payer by expediting final decisions on siting cases.

Financial analysis, which is the PUC's responsibility, is closely linked with development of energy facilities. The issues of capital cost and availability, effects of capital expansion upon the rate base, and the ability of rates to support new capital facilities are all critical issues to new power plant construction. Having these issues resolved in one agency will be more effective

and will provide more certainty in the regulatory process. Planning to meet future needs can progress with some assurance that the future facilities are capable of being financed.

Con: There are, however, several disadvantages to this alternative. First, the Warren-Alquist Act purportedly placed responsibility for the four major functions in one agency to insure a comprehensive approach to regulation and to provide the motivation for alternatives development. Splitting the functions among two or more agencies eliminates this goal. In practice, such a split will reduce the ability of the state to have any real policy impact since regulation is made distant from policy formulation. How can policy have any real effect when it has no administrative machinery to implement it? Can a Department of Energy ensure its policies will be effective when a major portion of their implementation is carried out by a regulatory agency? Combining the program and regulatory processes offers both consistency and impact.

The PUC is not a land use agency; it is an economic regulatory body. It has little experience and staff to conduct the necessary investigations and reviews for major land use decisions. If power plant siting were to be transferred to the PUC, the staff of the Commission responsible for this function could be transferred to San Francisco with the attendant disruption and loss of qualified individuals. In a period of declining state expectations and reduced ability to attract qualified staff, this disruption could be a serious problem. Furthermore, cooperation between state agencies has been a problem in the states' energy planning

efforts. Placing regulatory process in San Francisco while the administrative process remains in Sacramento will exacerbate the problem.

The Commission was created partly because of the public's view that the PUC, when it was responsible for power plant siting, was not effective as a siting authority. As stated previously, the PUC is an economic regulatory agency. The PUC may be unable to balance both economic and land use issues. A question remains whether the PUC is better able now than it was in the past to perform the siting function.

Transfer All Energy Commission Functions to PUC

This option calls for the transfer of all functions presently performed by the Commission to the PUC. This will mean that the PUC will be the agency with authority for power plant siting, forecasting, conservation, and alternatives development. All present PUC functions would be retained and the present membership unaltered.

Pro: The advantages of this option are similar to those discussed in the previous section dealing with the split of functions between a department and a commission. This would provide for greater coordination of the siting and financing decisions since both will be made in the same agency. There would be more certainty and expedition in the siting process because the decisions of the PUC are directly reviewable by the Supreme Court. Forecasting could be made more comprehensive by handling both gas and electric demand.

Con: This proposal would require a substantial movement of staff from the Commission to San Francisco, with all the disruption associated with such a move. The present regulatory casework would be interrupted as would any legal proceedings in which the Commission is involved. There are presently several cases in the siting process of the Commission and their disposition would be thrown into confusion.

The problems identified in third section of this report (analysis of Energy Commission) concerning the accountability of commissions, their tendency to be slow to act, their lack of accountability, and their inability to make policy and coordinate decisions, will not be solved by replacing one commission with another. There is no indication that the PUC is in any better position to correct the stated problems than the Commission. This alternative would also create new problems for the PUC by combining in that agency both regulatory and administrative processes. As stated previously, combining these processes has caused difficulties for the Commission and will inevitably cause the same problems for the PUC. There is little indication that more definitive policy or better planning and regulation will result from this proposal.

REALLOCATION OF ENERGY FUNCTIONS

The final category for reorganization is to reallocate energy responsibilities among appropriate state agencies. Currently, energy responsibilities are administered by the Commission, the PUC, the ARB, the SWRCB, and the Coastal Commission. In addition,

agencies such as SolarCal, OAT, and the Solid Waste Management Board each have responsibility for energy programs.

There are many combinations that can be devised for a reallocation of energy functions. Three basic patterns emerge from such a review, however. First, the siting and forecasting functions of the Commission can be allocated to another agency. Second, the conservation and alternatives development functions of the Commission can be allocated to another agency or several agencies. Third, other agencies' responsibilities can be transferred to the Commission.

Transfer of Siting and Forecasting from Energy Commission

The demand forecast, determination of available technologies, and power plant siting are important energy functions. These functions could be transferred to the PUC or divided among the Office of Planning and Research (forecasting and the Biennial Report) and the PUC (siting). The Commission could retain the promotional functions of conservation and alternatives development. The Commission could participate in the siting and planning process of the agencies given the siting and planning authority.

Pro: The advantages of this form of organization are similar to those mentioned under the split of functions in second part of this section. Assuming that siting and forecasting go to the PUC, this option has the advantages of consolidating: 1) siting and rate setting, and 2) gas and electric forecasting.

Con: The disadvantages of this reallocation are also similar to those noted in earlier schemes where the regulatory process is

disrupted and extensive staff movement is required. In addition, the Office of Planning and Research is not an appropriate agency to perform the Biennial Report function or the forecasting function. OPR is strictly an executive agency and would have difficulty providing the proper forum for debate and dissent needed for adjudicating the forecast. OPR has an even more difficult task in this regard because it is totally within the Governor's office and has little or no functional ties with other agencies, an important factor in coordination. Furthermore, OPR's staff would have to be expanded substantially to prepare the Biennial Report and the forecast. Since OPR has traditionally had a small staff, they would probably experience severe "start-up" problems.

This reallocation would leave the Commission administering the promotional program of conservation and alternatives development. There is little reason for a commission to be responsible for these programs. Commissions are inherently less efficient and lack the ability to manage staff resources well. These functions do not require a five-member, full-time body for their administration.

Transfer of Program Functions From Energy Commission

This alternative is the inverse of the previous alternative. It removes the program functions from the Commission and transferring them to agencies such as the Department of Housing and Community Development (HCD), OAT, SolarCal and other line agencies. The Commission would retain authority for forecasting and power plant siting, making the Commission primarily a regulatory agency. Any

agency, or combination of agencies, which already administers energy-program functions could receive additional program functions. For example, the PUC has responsibility for utility conservation and research. HCD has duties in the building standards area. OAT and SolarCal are involved with solar energy designs and buildings. Those agencies would divide the program activities now performed by the Commission.

Pro: The advantages of separating the program functions from those of regulation were discussed earlier in the second section of this part. The combination of these programs calls into question the integrity of the regulatory process and may blunt the effectiveness of the promotional programs. Placing these programs in line organizations allows the necessary flexibility, speed of action and accountability needed to provide leadership in these areas. The Governor would be able to make changes in policy and direction and could influence new state programs in areas where direct influence is appropriate.

Con: The disadvantages of this alternative differs from those of creating a department for programs and transferring the regulatory activities to the PUC. Here many of the conservation and alternatives programs would be fragmented, rather than mutually supportive. For example, setting conservation standards for buildings could be assigned to MCD, but promotional conservation programs might be the responsibility of OAT. Separating the programs reduces their effectiveness because there are a number of interrelationships within each area. Passive solar design techniques,

for example, can be encouraged by well-designed building performance standards. Separating these programs may result in less effective programs.

Another potential disadvantage to this alternative is the disruption it would produce in the present system. Staff from the Commission working in the conservation and alternatives area would be transferred to several different state agencies; creating some displacement and potential morale problems.

Increased Authority for the Energy Commission

As indicated earlier, agencies such as the ARB, PUC, SWRCB, and the Coastal Commission, all have responsibilities relating to energy development and use. These functions, as they relate primarily to power plant siting, could be performed by the Commission. The Commission, therefore, could issue the permit for air quality in new power plants and determine the ability of utilities to finance new facilities. The purpose of the increased authority is to create a "one stop shop" for permits for new power plants. Applicants would receive or be denied a permit for new plants in one agency. There may be conflicts with federal law in some of these areas, however.

The Commission could also assume the present energy programs of OAT, SolarCal, and other related agencies. This would centralize conservation and alternatives development activities.

Pro: The desire for a one-stop agency for power plant siting has been expressed on numerous occasions, and proposals have often

been put forward in the Legislature. Its advantages are obvious -- saving time and money. Without the multitude of permit agencies to go to, the utilities could expedite construction of needed facilities and reduce delays and expenses. Placing these functions in one agency may also assist in providing the balance between the requirement for new energy facilities and protection of air and water quality and increase the efforts to mitigate environmental impacts of development. The one-stop shop could also reduce the present level of uncertainty that exists with air quality requirements and other resource issues. One agency could now make both permit determination and provide the early signals on feasibility and potential mitigation measures.

Con: The disadvantages of transforming these functions relates to the practicality of making the changes. There is almost no way for the Energy Commission or any other commission to replicate all the talents contained in agencies such as the PUC, ARB, and SWRCB. These agencies have a staff of experts in the various scientific, engineering, and financial matters which are needed to perform their program regardless of the power plant work performed by the Commission. Therefore, even if the Commission could replicate their talents, there would be duplication of efforts. It is by far more preferable to work on a common timetable such as that contained in the ARB-Commission agreement.

There is substantial doubt that if the state provided for the Commission to issue permits for air quality or other programs

administered in part under federal law, that the respective federal agencies would authorize such a move. For example, it is questionable whether EPA would allow two state agencies to be responsible for air quality regulation. Such a transfer is likely to cause confusion and may not accomplish anything.

Each of the agencies discussed above was created to solve a serious problem or regulate various activities in the public interest. There has been no determination that energy needs are any more important than the needs of these other areas. Is energy development more important than clean water or air? There may be instances where the requirements of energy and other resources conflict, but this conflict should not automatically be resolved in favor of energy development.

FOOTNOTES

[1]Sandy Motley, Member, Advisory Committee to the Joint Committee on Energy Policy and Implementation, Report to the Joint Committee, January 11, 1979, p 2.

[2]California, Senate, Committee on Public Utilities, Transit and Energy, Phase II Report, Review of Organization and Management of the California Public Utilities Commission, September 1976.

[3]California Public Utilities Code, Section 1001.

[4]California, Public Utilities Commission, Decision No. 89316 for Pacific Gas and Electric Company's Applications No. 57284 and 47385.